PRODUCT CODE
SHOWERconc-B2-CLR

Ecwamix Chemical Systems
Your Specialist Partner in Sustainable Chemical Solutions

Published on: 01/12/2010
Reviewed on: 10/01/2023

SHOWERconc B2-CLR

TECHNICAL DATA SHEET

DESCRIPTION

SHOWERconc B2-CLR is a **Liquid Body Soap (SHOWER GEL) - Concentrate.** Can be used as a Shower Gel (Liquid Body Soap).

This pour-able liquid concentrate consists of Anionic, Amphoteric & Non-Ionic Surfactants, Water Conditioners, Sterilizers and Preservative. It dissolves in water in 15 minutes with agitation, or 3-5 hours without.

Once fully dissolved: **OPTIONAL** - Add a Measured Quantity of Fragrance and/or Dye of Choice, plus the addition of a measured quantity of Salt (± 2- 3%), to produce a finished transparent liquid body soap in keeping with market standards.

FORMULATION/COMPOSITION

SHOWERconc B2-CLR recommended Dilutions:

1:11.5 (8%) – Economy Product (4.9% Active)
1:9 (10%) – Standard Product (6.1% Active)
1:7.3 (12%) – Premium Product (7.3% Active)

PHYSICAL & CHEMICAL PROPERTIES

Form	Heavy Liquid
Colour	Clear, transparent
Odour	Typical
pH (as manufactured)	6.5 – 7.5
Active Content	Surfactant 61%
Viscosity	8 500cps @ 25°C Brookfield RVT #6 Spindle @ 5 RPM
Precautions	May cause irritation due to high concentration.
Handling	Non-Flammable. Keep containers closed to prevent ingress of water. Due to the highly concentrated nature of the product it is recommended that processing staff wear gloves, eye protection & respiration apparatus when handling the raw concentrate.
Packing	20 Kg Bucket - Polypropylene 200 Kg Open top drum – High Density Polyethylene

MANUFACTURER/SUPPLIER

Ecwamix Chemical Systems (Pty) Ltd
3 Granville Avenue Lea Glen Roodepoort, Gauteng South Africa
Information
Tel: (o/h) +27 011 472 2256 Fax: +27 011 472 2121
E-mail: ecwamix@netactive.co.za
Emergency contact:
Office hours: 011 472 2256

SAFETY & HANDLING
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Dilution Chart: SHOWERconc B2-CLR (CLEAR SHOWER GEL)

Batch Size (in Litres)	Economy			Standard			Premium		
% USE	8%			10%			12%		
RATIO	1:11.5			1:9			1:7.3		
Batch Size that you wish to make (in Litres)	Conc	Water	2.4% Salt	Conc	Water	2.0% Salt	Conc	Water	1.8% Salt
2	0.16	1.84	**0.048**	0.2	1.8	**0.04**	0.24	1.76	**0.036**
5	0.4	4.6	**0.12**	0.5	4.5	**0.1**	0.6	4.4	**0.09**
10	0.8	9.2	**0.24**	1	9	**0.2**	1.2	8.8	**0.18**
20	1.6	18.4	**0.48**	2	18	**0.4**	2.4	17.6	**0.36**
50	4	46	**1.2**	5	45	**1**	6	44	**0.9**
100	8	92	**2.4**	10	90	**2**	12	88	**1.8**
200	16	184	**4.8**	20	180	**4**	24	176	**3.6**
250	20	230	**6**	25	225	**5**	30	220	**4.5**
300	24	276	**7.2**	30	270	**6**	36	264	**5.4**
500	40	460	**12**	50	450	**10**	60	440	**9**
1000	80	920	**24**	100	900	**20**	120	880	**18**
2000	160	1840	**48**	200	1800	**40**	240	1760	**36**
3000	240	2760	**72**	300	2700	**60**	360	2640	**54**

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PROPERTIES/APPLICATIONS/USE

Using the chart above, first decide on the size of the batch that you wish to make (Batch Size column).

Now decide on the dilution (strength) of your finished product (% Use rows across the top).

Let's assume you decide to make 200 Litres of **Standard Liquid Body Soap** at a strength of 1:9 (10%). If you look across from the number **200**, in the Batch Size block, to the Conc column under **1:9** you will see that you need **20Kg** of ***SHOWERconc B2-CLR***. The Water column to its right tells you that you need **180 Litres of water**, and the Salt column to the right of that tells you that you will need **4KG of Salt**:

1. Fill the tank with the Required amount of **Water** (180Lt/Kg).
2. Using your scale, weigh 20Kg of ***SHOWERconc B2-CLR*** into a bucket/s, and weigh 4kg of salt into another clean bucket.
3. Place your mixer in the mixing tank and start it running at a Moderate speed.
4. Now steadily pour in the ***SHOWERconc B2-CLR,*** scraping out as much from the bucket/s as possible. Leave the mixer running for at least 15 minutes.
5. Switch off the mixer after 15 minutes and allow the mixture to stand for about half an hour, the bubbles will come to the top!
6. **OPTIONAL:** Stir in a Measured Quantity of a Fragrance and/or Dye of Choice
7. Start the mixer again at a low speed and begin to slowly pour in the salt. After about half the salt has been poured in, the mixture will begin to thicken. You will need to increase the speed of the mixer while adding the remaining salt, keeping the mixture moving all the time. **NB: you don't want to mix too fast, or you may cause lots of bubbles in your product. Don't panic if you do, they will float to the top, but it will take a few hours!**
8. Once all the salt has been added, continue mixing for 5 minutes at the highest speed you can, without sucking in air. **If necessary, add more water to bring the batch up to the 200 Litre mark.**
9. Now switch off the mixer and let the batch stand for 10 minutes then check with a spoon to see if your product is thick enough, just remember that it will get slightly thicker once it has stood for about 12 Hours.

Congratulations, you have just manufactured your first batch of Shower Gel!

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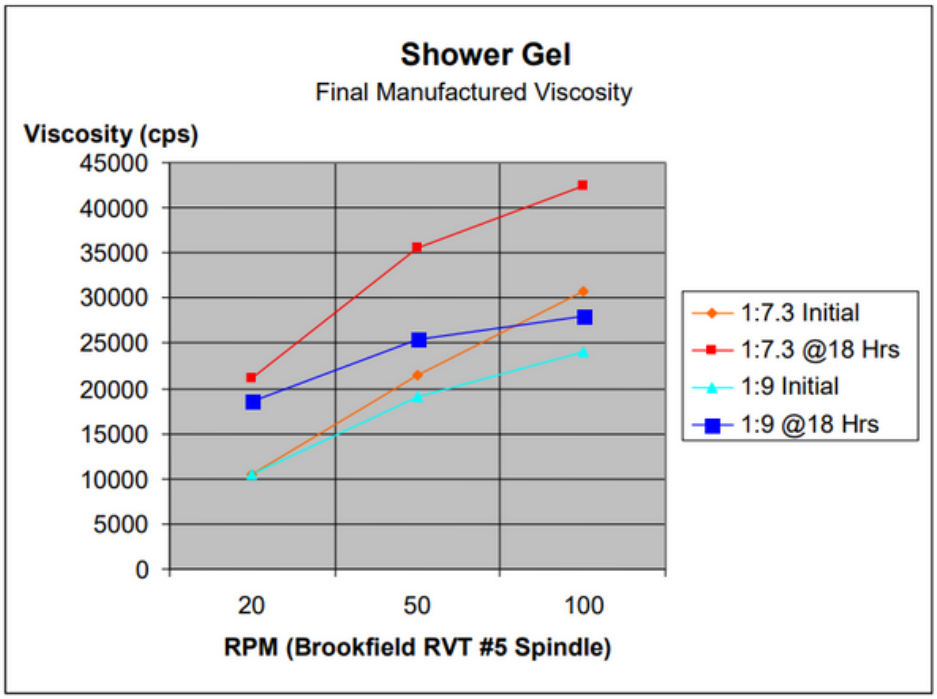
FINISHED PRODUCT – VISCOSITY ANALYSIS



A common habit of literally every consumer is to judge the quality of a product, such as a Liquid Body Soap, by its viscosity (thickness). Ironically, it is very easy these days to create a vastly more powerful product with a viscosity like that of water, as much as it is possible to make plain water as thick as a Liquid Body Soap. And unfortunately the latter situation does occur, with many low quality products using auxiliary thickeners to hide the fact that they don't contain sufficient active material. Building stable and acceptable viscosity into a Liquid Body Soap has long been a problem that has plagued the manufacturers of economy products. The reason for this is that they rarely understand the interactions of the various ingredients with respect to their contribution to the viscosity of the end product. It is also true to say that some systems use more active ingredient than may be necessary, in order to guarantee a suitable and stable viscosity - this is obviously an unnecessary expense. With many systems, the final addition of salt (to increase the viscosity) is a very delicate issue. It is at this point that the entire batch can be ruined by the addition of too much salt, too little often appears good for a while but then slips backwards to a watery product some days later. We believe we've taken the guesswork out of the equation! The above graphs indicate that our product, even at the lower dilution of 1:9, yields viscosities 15% higher than is required. This test was conducted to establish how high the viscosity could be driven and how much salt the system could tolerate before collapsing. Despite an almost 50% **over dosage** of salt the system simply yielded a very high viscosity that actually **increased further** after 18 hours! The results obtained indicate that our product will reliably deliver suitable and stable viscosity, and further tolerate an unusually high margin of error. These factors substantially reduce the manufacturing risks and simplify the process.

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