

Technical Data Sheet

4 January 2011

Product:

APconc-BZ-CLR

Description:

All-Purpose Cleaner – Concentrate (Un-Fragranced & Non-Ammoniated)

This paste concentrate consists of **Anionic & Non-Ionic Surfactants, Water Conditioners, Pigments and Preservatives**. The **First Step** requires the addition of the **Ecwamix APconc - BZ-CLR** to the water in the mixing vessel, it dissolves in 10 - 15 minutes with moderate agitation, 3-5 hours without. **Once fully dissolved, allow air to come out. The Next Step is to add a percentage of either: a) 0.5-1.5% Ammonium Hydroxide(25%) or b) 0.2% of a suitable Fragrance to the mixing vessel while stirring. Now stir in.**

Lastly, it only requires the addition of a measured quantity of Salt ($\pm 2\%$) to produce a finished Non-Abrasive All-Purpose Cleaner of impressive Viscosity, Appearance and Value for Money

Active Content: Total Surfactants: $\pm 66\%$

Recommended Dilutions for Non-Abrasive ALL-PURPOSE Cleaner(Ammoniated or Fragranced):

- 1(**APconc - BZ-CLR**) : 11.5(Water)-(8%) – **Economy Product** (5.28% Active)
- 1(**APconc - BZ-CLR**) : 9.0(Water)-(10%) – **Standard Product** (6.60% Active)
- 1(**APconc - BZ-CLR**) : 7.3(Water)-(12%) – **Premium Product** (7.92% Active)

Form: Viscous Paste

Colour: White/Translucent

Odour: Typical

pH: 8.5 – 9.5

Viscosity: 22 000 cps @ 25°C Brookfield RVT #6 Spindle @ 5 RPM

Packing: 200 Kg Plastic Open-Top Drum(HD Poly-Propylene)
20Kg Plastic Bucket(Poly-Propylene)

Precautions: May cause respiratory irritation due to High Concentration.

Handling: Non-Flammable. Keep containers closed to prevent ingress of water.
Wear gloves & respiration apparatus when handling raw concentrate.

Suggested “ Non-Abrasive All-Purpose Cleaning Liquid” formulations using

Ecwamix APconc - B2-CLR

a.Non-Abrasive All-Purpose Cleaner :Economy: 8%

		Batch size - All weights in Kg				
INGREDIENTS	% USE	100	200	300	500	1000
Water(Approximate)	92.00%	92.00	184.00	276.00	460.00	920.00
Ecwamix APconc - B2 - CLR	8.0%	8.00	16.00	24.00	40.00	80.00
Fragr.- Lemon/Etc	0.20%	0.20	0.40	0.60	1.00	2.00
OR:Amm Hydr. 25%	1.0%	1.0	2.0	3.0	5.0	10.0
Salt-QS to Req Visc.	2%	2	4	6	10	20
Total	100.00%					

b.Non-Abrasive All-Purpose Cleaner :Standard:10%

		Batch size - All weights in Kg				
INGREDIENTS	% USE	100	200	300	500	1000
Water(Approximate)	90.00%	90.00	180.00	270.00	450.00	900.00
Ecwamix APconc - B2 - CLR	10.00%	10.00	20.00	30.00	50.00	100.00
Fragr.- Lemon/Etc	0.2%	0.2	0.40	0.60	1.00	2.00
OR:Amm Hydr. 25%	1.0%	1.0	2.0	3.0	5.0	10.0
Salt-QS to Req Visc.	2%	2	4	6	10	20
Total	100.00%					

c.Non-Abrasive All-Purpose Cleaner:Premium:12%

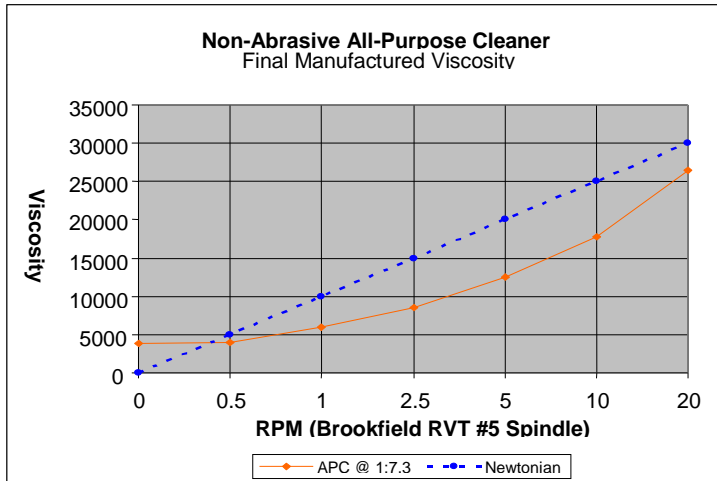
		Batch size - All weights in Kg				
INGREDIENTS	% USE	100	200	300	500	1000
Water(Approximate)	88%	88.00	176.00	264.00	440.00	880.00
Ecwamix APconc - B2 - CLR	12.00%	12.00	24.00	36.00	60.00	120.00
Fragr.- Lemon/Etc.	0.2%	0.2	0.4	0.6	1.00	2.00
OR:Amm Hydr. 25%	1.0%	1.0	2.0	3.0	5.0	10.0
Salt-QS to Req Visc.	2%	2	4	6	10	20
Total	100.00%					

Directions for Use:

1. Charge mixing vessel with the Required amount of Water. Start the Mixer at a Moderate to high speed – avoid drawing in air at all times!
2. Now steadily pour in the Required amount of **Ecwamix APconc - B2-CLR**, and stir until Smooth and Thoroughly Dispersed. At this point, the Mixer can be Switched Off for 10-20 minutes, if necessary, to Allow any Air to Escape.
3. Stir in Measured Amounts of either a Fragrance of Choice OR Ammonium Hydroxide 25%
4. Start the Mixer again at Low Speed and begin to Slowly pour in the Salt. After ± half the Salt has been added, the mixture will begin to thicken. Increase the Speed of the Mixer while adding the remaining Salt, keeping the mixture moving all the time.
5. Once all the salt has been added, continue mixing for 5 minutes at high speed. If necessary, add more water to bring the batch up to the Required Mark.
6. Switch off the mixer and let the Batch stand for 10 minutes, check with a spoon to see if your Product is Thick enough, just remember it will get slightly thicker once it has stood for about 12 hours.
7. Check the pH to 8.5 – 9.5.
8. PLEASE NOTE: when using the Ammonium Hydroxide-25%, the end pH will be between 9.50 – 10.50

**Congratulations, you have just manufactured your first batch of :
Non-ABRASIVE All-PURPOSE CLEANER(Ammoniated or Fragranced) !!**

Finished Product – Viscosity Analysis



(Left) Graph: A thixotropic rheology is one in which a certain amount of energy must be applied before motion will occur, and is indicated by a graph line that begins at some value on the 'Y' axis (viscosity) for an 'X' axis (energy) value of '0' (see Orange line on graph). This is actually what the word "Gel" refers to. Providing that the value of energy required for motion to occur, is higher than the potential energy (gravity) of the particulate, then motion cannot occur and the particulate will remain suspended indefinitely. You will notice that the graph line (Orange) of our product begins at around 4000cps; this indicates a stable product in which no separation will occur!

One of the greatest problems as far as the production of an **Economical Non-Abrasive All-Purpose Cleaner** is concerned, is **a. the Cost of a Non-Abrasive All-Purpose Cleaner** as opposed to that of an **Abrasive All-Purpose Cleaner**(as the **Abrasive-Calcium Carbonate** is relatively **inexpensive** as opposed to the amount of **Surfactants** used to provide a **Non-Abrasive All-Purpose Cleaner** with the **equivalent cleaning activity**) and **b. Viscosity (Thickness-** is a critical aspect of the both **Non- & Abrasive All-Purpose Cleaner formulations**). These type of products inherently contain a solid particulate (abrasive element or filler), which, by way of the fact that it is heavier than water, will always tend to settle in the bottom of the product. This separation is clearly visible as a layer of white powder settles out of the clear detergent system, and is guaranteed to stop a consumer from purchasing the product. This is one of the primary reasons why these types of products are always packed into opaque bottles.

The Consumer Market has further indicated a movement away from the use of **Abrasive All-Purpose Cleaners** in Favour of **Non-Abrasive All-Purpose Cleaners**. This Shift in the Market is a result of the damage caused(to the various modern hard surfaces) by the **Abrasives**. Manufacturers of various hard surfaces(including **Stainless Steel, Enamel, Vinyls, Plastics and Coatings**) used in the manufacturing of **Appliances, etc.** are promoting the use of a **Non-Abrasive All-Purpose Cleaner**. We, at **Ecwamix Chemical Systems** have developed **Ecwamix APconc - B2-CLR** & **Ecwamix APconc - B-Fr** which is a **Highly Active Non-Abrasive Cleaner Concentrates** that can be **Diluted, Fragranced(Optional) and Thickened** to a **Finished Product** that **Performs Excellently, Matches the Appearance and Effectivity(of Abrasive All-Purpose Cleaners)** and is **Simple and Economical to Produce**.

Disclaimer / Non-warranty

This product has been subjected to limited stability tests and has been shown to perform well. However formulators should establish their own long term stability and functionality tests. The information contained herein is to our best knowledge true and accurate, but since the conditions of use are beyond our control, **Ecwamix Chemical Systems**. Disclaims any liability in connection with the use of this product and/or information. Warranty extends only as far as to the replacement of material shipped if not compliant with the specification as set out in the attached "Certificate of Analysis" and within the expiry period of the said product. All recommendations or suggestions are made without guarantee. It is good practice to conduct one's own safety/stability tests on all final Formulations prior to marketing.