

CCN-2 and CCP-2 MoPAC Motion Picture Chemistry

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MoPAC Concentrate chemicals for motion picture processes

Film makers are capturing images exactly the way they envision them. The real moment of truth occurs when the film gets processed. To accomplish this, CPAC Imaging has developed the CCN-2 and CCP-2 chemistry concentrates. Produced under strict quality control procedures, **MoPAC** motion picture kit chemistry concentrates make the ideal solution for the motion picture lab that demands continuous, supreme quality products, without tedious measuring and analyzing.

Packaged in different concentrate volumes ranging from 20 liter concentrate drums up to 200 L, to suit the needs for any size motion picture lab.

MoPAC CCN-2 Prebath and Replenisher

The prebath 1 L of concentrate makes 3.33 L of replenisher or tank solution. Minimum concentrate quantity consists of one 20L drum, add water to yield 66.6 liters of replenisher or tank solution.

Catalog Number	Product Description	Concentrate (L)	Kit Size (L)
15EN-1100	CCN-2 Prebath & Replenisher	30	100
15EN-1200	CCN-2 Prebath & Replenisher	200	666

Specifications :

- Time : 0'10"
- Temperature : 27°C ± 1 °C
- Replenishment rate: 400 ml/30.5m of 35mm film
- Mixing ratio: 1 L concentrate + 2.33 L water makes 3.33 L replenisher

MoPAC CCN-2 Developer Replenisher Part A and Part B

With **MoPAC** Chemistry CCN-2 developer concentrated kit chemistry, you are assured of a continuous stable development process. Part A and Part B available in sizes up to 200 L.

Catalog Number	Product Description	Concentrate (L)	Kit Size (L)
15EN-210A	CCN-2 Color Developer Part A	30	150
15EN-220A	CCN-2 Color Developer Part A	200	1,000
15EN-210B	CCN-2 Color Developer Part B	30	600
15EN-220B	CCN-2 Color Developer Part B	200	4,000

Specifications :

- Time : 3'00"
- Temperature : $41.1^{\circ}\text{C} \pm 0.1^{\circ}\text{C}$
- Replenishment rate: 900 ml/30.5 m of 35 mm film
- Mixing ratio: Part A 4 L+ Part B 1 L + water 15 L to make 20 L of Replenisher

MoPAC CCN-2/CCP-2 UL Bleach & Replenisher

The bleach can be used in both the CCN-2 and CCP-2 process. 2 liters of concentrate makes 3.33 liters of replenisher or tank solution. Concentrate quantity consists of one 20 L drum, add water to yield 66.6 liters of replenisher or tank solution.

Catalog Number	Product Description	Concentrate (L)	Kit Size (L)
17NP-3100	CCN-2/CCP-2 Bleach & Replenisher	30	50
17NP-3200	CCN-2/CCP-2 Bleach & Replenisher	200	333

Specifications :

- Time : CCN process: 3'00" / CCP process: 1'00"
- Temperature : $27^{\circ}\text{C} \pm 1^{\circ}\text{C}$
- Replenishment rate: CCN process: 200 ml / CCP process: 400 ml/30.5 m of 35 mm film
- Mixing ratio: 2 L concentrate + 1.33 L water to makes 3.33 L replenisher

MoPAC CCN-2/CCP-2 Fixer & Replenisher

Fixer can be used in both the CCN-2 and CCP-2 process. 1 liter of concentrate makes 3.33 liters of replenisher or tank solution. Concentrate quantity consists of one 20 L drum, add water to yield 66.6 liters of replenisher or tank solution. If used in with a closed loop silver recovery system, the replenishment rate can be reduced to 200 ml.

Catalog Number	Product Description	Concentrate (L)	Kit Size (L)
17NP-4100	CCN-2/CCP-2 Fixer & Replenisher	30	100
17NP-4200	CCN-2/CCP-2 Fixer & Replenisher	200	666

Specifications :

- Time : CCN process: 2'00" / CCP process: 0'40" + 0'40"
- Temperature : CCN process: $38^{\circ}\text{C} \pm 1^{\circ}\text{C}$ / CCP process $27^{\circ}\text{C} \pm 1^{\circ}\text{C}$
- Replenishment rate: 200 - 600 ml/30.5 m of 35 mm film
- Mixing ratio: 1 L concentrate + 2.33 L water makes 3.33 L replenisher

MoPAC CCP-2 Developer & Replenisher Part A & Part B

With CPAC's **MoPAC** CCP-2 developer concentrates, yield continuous stable processing results for original film or internegative film.

Catalog Number	Product Description	Concentrate (L)	Kit Size (L)
16EP-211A	CCP-2 Color Developer Part A	30	150
16EP-221A	CCP-2 Color Developer Part A	200	1,000
16EP-211B	CCP-2 Color Developer Part B	30	300
16EP-221B	CCP-2 Color Developer Part B	200	2,000

Specifications :

- Time : 3'00"
- Temperature : $36.7^{\circ}\text{C} \pm 0.1^{\circ}\text{C}$
- Replenishment rate: 690 ml/30.5 m of 35 mm film
- Mixing ratio: Part A 2 L+ Part B 1 L + water 7 L to make 10 L of replenisher

MoPAC CCN-2/CCP-2 Final Rinse & Replenisher

A high quality Anti-bacterial rinse and wetting agent containing anti-algae products and prepares the film for drying. CPAC Imaging Final Rinse is available in 30 L concentrates. Larger and smaller concentrate volumes are available upon request.

Catalog Number	Product Description	Concentrate (L)	Kit Size (L)
17NP-5100	CCN-2/CCP-2 Final Rinse & Replenisher	30	4,226

Specifications :

- Time : 0'10"
- Temperature : CCN process: $27^{\circ}\text{C} - 38^{\circ}\text{C}$, CCP process: $27^{\circ}\text{C} \pm 3^{\circ}\text{C}$
- Replenishment rate: 400 ml/30.5 m of 35 mm film
- Mixing ratio: 710 ml concentrate + 99.29 L water makes 100 L replenisher

MoPAC automatic chemical mixer

The Rockwell Hitec Chemical mixers are a precision automatic mixer ideal for a lab which requires the highest possible standards of processing and reliability. In combination with CPAC's motion picture chemical concentrates, your chemical department becomes fully automated, eliminating the manual mixing and handling.

HV3 - High volume mixer for motion picture labs

The model HV3 is the latest version of the Rockwell Hitec Automatic Chemical Mixers which have been in use since 1984. The new models feature many detailed improvements as a result of experience with hundreds of installations around the world.

The mixers consist of a cabinet containing a control unit, a thermostatic water blender and up to 7 mixing units, one for each solution.

Each solution unit mixes or recycles small batches, normally 4.5 litres and pumps the solution into replenisher storage tanks. The cycle is repeated as often as required, to keep the processors supplied with freshly mixed chemistry.

Individual mixing units differ in the number of constituents and their capacity. Outputs can be up to 150 litres/hr. For very large labs 2 or more units per solution can be used.



The mixing sequence is entirely conventional, taking water or processor overflow and adding chemical concentrates in turn. Each stage is checked, as if by a skilled technician and when correct, the mixer proceeds to the next step.

A very simple but safe method, not requiring conventional metering pumps, is used to measure out the correct volumes of the constituent parts of a mix.

The self-priming pumps feed the concentrates or water into a measuring chamber mounted above the mixing tanks. The measuring chamber is filled to a precise volume each time a constituent is dispensed and the time to fill is used to calculate how long the pump must run to measure out the correct quantity.

The measuring method is extremely accurate, resulting in precise process control, although it provides a simple fail-safe warning system. If the time to fill the measuring chamber is outside pre-set limits, the mixer stops and gives an audible and visible warning.

The method of measuring has a number of advantages:

The mixers are fool proof - they will either mix correctly or stop and give a warning. The mix data (list of constituent parts) is set by means of a keyboard or from a remote PC and requires no adjustment of metering pump bellows or cams. The quantity dispensed depends solely on the volume of the measuring chamber, which is unlikely to change, and is almost completely independent of pump characteristics.

Small batch mixing improves consistency.

Mixers are very compact and require a small fraction of the space required for manual mixing. Exposure to chemicals is minimised, reducing health hazards and simplifying compliance with legal requirements

HV3 mixers are modular and are specified individually for every installation. Each mixer contains 2-7 mixing units of the appropriate specification. All Rockwell mixers can be custom configured to meet the needs of each individual motion picture laboratory.

A few customer comments:

"Since we switched to CPAC for our motion picture chemicals in concentrates, we saved ourselves a lot of time on manual mixing from bulk chemicals. Additionally, we get product shipped almost instantly after ordering. In combination with the Rockwell automatic mixers, our chemical department can be run with a minimal amount of staff. Our chemical processes are stable as never before due to this automation. For the areas where we still prefer to work with bulk chemicals, CPAC also there can supply us with premium quality products. All this combined with CPAC's Silver recovery systems allows us to reduce chemical waste and optimize our silver return from both the CCN and CCP fixer." **Tom Nicolaisen - Nordisk Film (Copenhagen, Stockholm and Oslo).**

"The Rockwell Hitec mixer revolutionised our chemical mixing and saved us many hour a day of labour." **Dick Knapmann - Todd AO London.**

"Rockwell Hitec mixers are the only way forward it's a necessity for all labs it's simple and cost effective, I recommend it to all my customers." **Chris Lane - Cinetec (Motion picture consultants London).**

The Chemistry Makes the Color

Why automatic mixing in your lab?

The main point we ask customers to do is to record how long staff take to chemical mix from the time they put on their lab coat to when the last tank is cleaned out - they are always amazed. For automated mixers it is not necessary to have a dedicated person for chemical mixing. All you need to consider is the man hours needed for someone to change the concentrate drums at the mixer when they are empty. For this you do not even need chemically skilled personnel, anyone can do it.

What steps are involved with manual mixing?

1. Clean out the tank
2. Add water to a set point - at the correct temperature
3. Add the correct concentrate and at the exact amount
4. Fill with water to the correct level.
5. Mix for several minutes if not 10's of minutes.
6. Transfer contents to holding tank.
7. Clean out the mixing tank

REPEAT THESE STEPS 11 TIMES AND DON'T MAKE ANY MIXING ERRORS!!

What steps are involved in Automatic mixing?

1. The mixer sounds an alarm that one (or more) of the concentrate tanks is empty
2. A staff member attaches a full concentrate drum to the mixer
3. The mixer is ready again to automatically mix and keep the replenishment tanks full.

THAT'S IT !! THIS TAKES JUST A FEW MINUTES.

Need more advantages?

1. Automatic mixing is far more accurate than manual mixing and will give far better results
2. No chemical corrections required because CPAC concentrates are 100% accurate
3. Reduced manpower require to run a high quality lab
5. Minimal staff exposure and handling of (corrosive) chemicals - Better safety
6. With concentrates ranging from 20 upto 600 liter tanks, the automatic mixer needs attention just once per week.
7. Replenishment tanks remain full at all times - resulting in a constant head pressure. This will guarantee a continuously more accurate replenishment in your processors.
8. No more rinsing of mix tanks
9. Reduced risk of contamination
10. Eliminates mixing errors
11. Smaller footprint than with a manual mixing setup
12. Failsafe
13. Economically priced
14. Minimal user intervention - cost effective by releasing staff from mixing

15. Will mix either correctly or stop and alert why it hasn't been able to.
16. Inexpensive parts and service
17. All models can be PC linked for greater flexibility and control, including detailed film usage and alerting of potential issues before they stop operation.
18. Can be set to recycle or mix all liquid chemicals to optimum accuracy
19. When used with CPAC's large chemical concentrate kits, this offers considerable cost savings
20. Can be installed virtually anywhere in the lab, even remote from the replenishment tanks since all models are fitted with transfer pumps and remote sensors.
21. Accurate measuring system that does not rely on metering pumps and works reliable even when pumps are several years old.
22. Simple user calibration



CPAC's chemistry concentrates
are available in sizes from
20 liter up to 1,000 liter drums



The Chemistry Makes the Color