

Coating Parameters – HPMC Based White and Pigmented Formulations

Nutrafinish[®], Titanium Dioxide Free Film Coatings are made specifically for nutritional and dietary supplement products regulated as foods. Elimination of titanium dioxide provides manufacturers with an alternative coating finish that satisfies aesthetic appeal while addressing current market concerns. Nutrafinish TiO₂ free film coating options are available as clear, white, or pigmented systems. The coating parameters listed in the table below are based on Colorcon data for HPMC based white and pigmented formulations. Individual product and machine functions should be considered, and conditions altered as required.

Pan Type		Fully Perforated Side Vented Coating Pan			
Pan Diameter	cm	38.1	60.96	122	152.4
	in	15	24	48	60
Solution Preparation					
Solvent		Purified Water	Purified Water	Purified Water	Purified Water
Solids Content	% w/w	18-20	18-20	18-20	18-20
Run Objectives					
Theoretical Weight Gain	% w/w	3-5	3-5	3-5	3-5
Tablet Charge	kg	1.5-3	12-15	120-160	320-350
Gun Configuration					
Example Spray Gun	Type	Schlick 931/7-1 S22	Spraying Systems 1/8 VAU	Schlick 931/7-1 S35 (ABC)	Manesty
Number of Guns	guns	1	1-2	3-4	5-6
Nozzle Diameter	mm	1.2	1.2	1.2	1.2
	in	0.05	0.05	0.05	0.05
Gun to Bed Distance	cm	10	17	25	25
	in	4	7	10	10
Gun to Gun Distance	cm	N/A	10	15	15
	in	N/A	4	6	6
Atomizing Air Pressure	bar	1.4	1.7	2.5	2.5
	psi	20	25	35	35
Pattern Air Pressure	bar	1.4	1.7	2.5	2.5
	psi	20	25	35	35
Process Parameters					
Drying Air Volume	cu.m/hr	250-290	425-470	2300-3060	5440-6630
	cu.ft/min	145-175	250-275	1350-1800	3200-3900
Pan Speed*	rpm*	18	14	8	6
Pre-warm tablet Bed	°C	45-50	45-50	45-50	45-50
	°F	113-122	113-122	113-122	113-122
Inlet Air Temperature	°C	60	65	65	65
	°F	140	149	149	149
Tablet Bed Temperature	°C	45-48	45-48	45-48	45-48
	°F	113-118	113-118	113-118	113-118
Spray Rate*	g/min	15-20	40-60	260-430	650-750
<p>*Pan speed should be set so that even mixing of the bed occurs. This will be influenced by tablet size, shape, friability, and baffle type in the pan. Spray rate numbers are estimated.</p>					

The information contained herein, to the best of Colorcon, Inc.'s knowledge is true and accurate. Any recommendations or suggestions of Colorcon, Inc. with regard to the products provided by Colorcon, Inc. are made without warranty, either implied or expressed, because of the variations in methods, conditions and equipment which may be used in commercially processing the products, and no such warranties are made for the suitability of the products for any applications that you may have disclosed. Colorcon, Inc. shall not be liable for loss of profit or for incidental, special or consequential loss or damages.

Colorcon, Inc. makes no warranty, either expressed or implied, that the use of the products provided by Colorcon, Inc., will not infringe any trademark, trade name, copyright, patent or other rights held by any third person or entity when used in the customer's application.

For more information, contact your Colorcon representative or call:

North America +1-215-699-7733	Europe/Middle East/Africa +44 (0)-1322-293000	
Latin America +54-11-5556-7700	India +91-832-6727373	China +86-21-61982300

You can also visit our website at www.colorcon.com



© BPSI Holdings LLC, 2022.

The information contained in this document is proprietary to Colorcon, Inc. and may not be used or disseminated inappropriately.

All trademarks, except where noted, are property of BPSI Holdings LLC.