

## Coating Parameters – Bulk Formulations

230U Opadry® SGR bulk coatings are part of the Opadry® SGR, rapid sugar film coating system. It is recommended that formula 230U coating suspensions are reconstituted at 30% solids w/w and applied to a minimum coating density of 42.1- 70.2 mg/cm<sup>2</sup> (30 - 50% weight gain). **The tablet charge (batch size) must be estimated to account for tablet growth resulting from high coating weight gain. Care should be taken to ensure even tablet mixing and efficient drying as the batch volume increases over time.** The coating parameters listed in the table below are based on Colorcon data. Individual product and machine functions should be considered and conditions altered as required.

		Fully Perforated Side Vented Coating Pan				Conventional Pan
Pan Diameter	cm	38.1	60.96	122	152.4	40.64
	in	15	24	48	60	16
<b>Solution Preparation</b>						
Solvent		Purified Water	Purified Water	Purified Water	Purified Water	Purified Water
Solids Content	% w/w	30	30	30	30	30
<b>Run Objectives</b>						
Theoretical Weight Gain	% w/w	30	30	30	30	30
Tablet Charge/Final†	kg	1.5 – 3.0	12 - 15	120 - 160	320 - 350	1.5
<b>Gun Configuration</b>						
Example Spray Gun	type	Schlick 931/7-1 S22	Schlick 931/7-1 S35 (ABC)	Schlick 931/7-1 S35 (ABC)	Schlick 931/7-1 S35 (ABC)	Schlick 970/7-1 S75
Number of Guns	guns	1	1 - 2	3 - 4	5 - 6	1
Nozzle Diameter	mm	1.2	1.2	1.2	1.2	1.2
	in	0.05	0.05	0.05	0.05	0.05
Gun to Bed Distance	cm	10	17	25	25	15
	in	4	7	10	10	6
Gun to Gun Distance	cm	N/A	10	15	15	N/A
	in	N/A	4	6	6	N/A
Atomizing Air Pressure	bar	1.4	1.4	1.7	1.7	1.4
	psi	20	20	25	25	20
Pattern Air Pressure	bar	1.4	1.4	1.7	1.7	1.4
	psi	20	20	25	25	20
<b>Process Parameters</b>						
Drying Air Volume	cu.m/hr	250 - 290	424 – 470	2300 – 3060	5440 - 6630	140
	cu.ft/min	147 – 175	250 – 275	1350 – 1800	3200 – 3900	80
Pan Speed	rpm*	18	14	7	6	30
Pre-warm Tablet Bed	°C	45 - 50	45 - 50	45 - 50	45 - 50	45 - 50
	°F	113 - 122	113 - 122	113 - 122	113 - 122	113 - 122
Inlet Air Temperature	°C	60	65	65	65	70
	°F	140	149	149	149	158
Tablet Bed Temperature	°C	42 - 47	42 - 47	42 - 47	42 - 47	45 - 47
	°F	108 - 117	108 - 117	108 - 117	108 - 117	113 - 117
Spray Rate	g/min	12 – 25	40 – 60	200 – 350	475 – 720**	10
Approximate Coating Times	min	90 - 100	190 - 230	350 - 460	370 - 520**	115
*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.						
†Tablet charge is dependent on tablet size, shape and targeted weight gain. ** Estimated						
#The recommended dispersion solids for Opadry SGR bulk coat is 30%, however 35% solids can be achieved depending on dispersion mixing and pumping capabilities.						

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