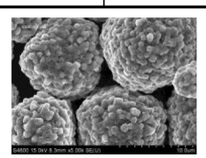
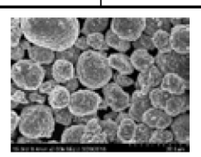
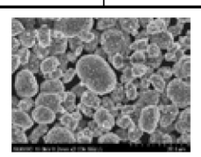
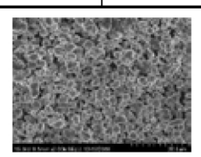
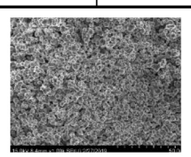
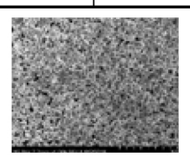
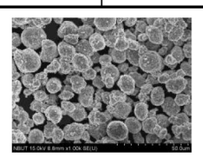
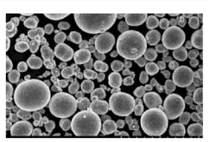
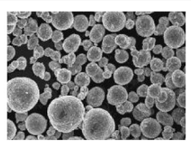
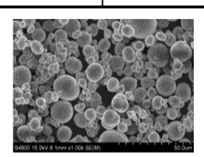
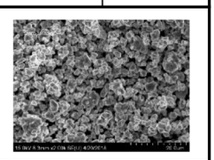
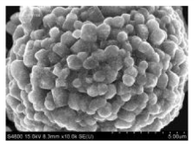
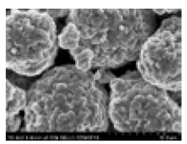
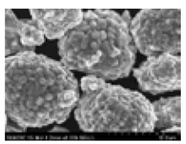
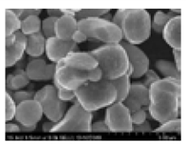
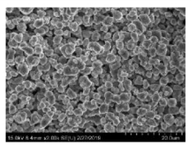
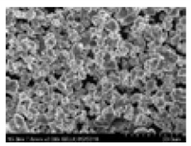
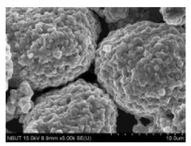
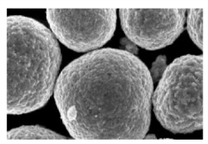
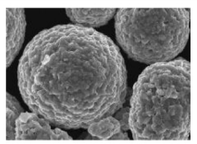
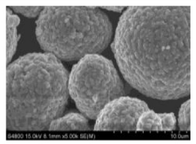
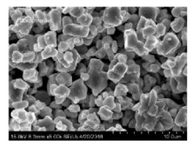
NCM正極活物質　販売製品一覧

2023年7月現在

Rm at Chemical Materials

NCM正極活物質		1		2		3		4		5		6		7		8		9		10		11	
製品記号		SB7LC		SB700		SB701C		SB740B		SB6503		SB76L		SB760		SB85E		SB800		SB800C		SB8303	
種別		NCM523		NCM523		NCM523		NCM523		NCM523		NCM622		NCM622		NCM811		NCM811		NCM811		NCM811	
項目	単位	基準値	測定標準値	基準値	測定標準値	基準値	測定標準値	基準値	測定標準値	基準値	測定標準値	基準値	測定標準値	基準値	測定標準値	基準値	測定標準値	基準値	測定標準値	基準値	測定標準値	基準値	測定標準値
外観	/	黒色粉末	/	黒色粉末	/	黒色粉末	/	黒色粉末	/	黒色粉末	/	黒色粉末	/	黒色粉末	/	黒色粉末	/	黒色粉末	/	黒色粉末	/	黒色粉末	
かさ密度	g/cm^2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	≥1.20	1.60	≥1.20	1.60	-	-	-	-
タップ密度	g/cm^3	≥2.00	2.38	≥2.00	2.21	≥2.00	2.12	≥1.70	2.00	≥1.50	2.21	≥1.80	1.97	≥2.10	2.32	≥2.10	2.40	≥2.10	2.40	≥2.2	2.45	≥1.40	1.58
比表面積	m^2/g	0.200~0.600	0.270	0.35±0.20	0.31	0.45±0.20	0.4510	≤1.00	0.70	≤1.00	0.54	≤0.90	0.62	0.25±0.10	0.2803	0.50±0.20	0.50	0.25±0.15	0.25	0.15-0.40	0.25	≤1.50	0.95
H_2O	ppm	≤400	130	≤500	180	≤0.050	0.019	≤0.045	0.03	≤500	223	≤500	183	≤0.040	0.0134	≤400	218	≤400	200	≤400	190	≤600	450
D10	μm	≥6.00	7.20	≥3.00	7.23	≥3.00	5.12	≥1.50	2.50	≥1.50	2.57	≥2.00	2.79	≥6.00	8.41	≥5.00	6.04	≥5.00	7.01	≥5.00	6.37	≥1.00	2.10
D50	μm	12.00±2.00	12.60	11.50±2.00	12.49	8.50±2.00	8.57	4.20±1.50	4.20	5.00±1.50	4.77	5.00± 1.50	5.01	14.50±2.00	14.80	10.00±2.00	10.31	13.00±2.00	12.99	11.00±1.50	11.12	4.50± 1.50	4.50
D90	μm	≤25.00	21.00	≤28.00	22.24	≤18.00	14.36	≤15.00	12.00	≤15.00	8.96	≤15.00	9.99	≤30.00	27.11	≤25.00	18.14	≤30.00	24.22	≤30.00	22.25	≤15.00	8.31
Li	wt%	7.40±0.20	7.38	7.00~7.60	7.40	7.40±0.20	7.39	7.40±0.20	7.35	7.40±0.20	7.34	7.40±0.20	7.37	7.40±0.20	7.37	7.40±0.20	7.40	7.40±0.20	7.40	7.40±0.20	7.42	7.15±0.30	7.40
Ni	wt%	30.00±1.00	30.00	30.00±1.00	29.70	30.00±1.00	30.05	30.00±1.00	30.25	37.80±1.00	38.41	36.30±1.00	36.56	36.30±1.00	36.56	49.00±1.50	49.15	47.50±1.50	47.67	47.50±1.00	47.35	49.80±1.50	49.30
Co	wt%	11.85±1.00	11.85	12.20±1.00	11.75	11.85±1.00	11.86	11.90±1.00	12.20	9.50±1.00	9.77	12.60±1.00	12.55	12.60±1.00	12.55	6.80±0.60	6.85	6.60±0.60	6.62	6.80±0.6	6.83	7.40±0.60	6.90
Mn	wt%	16.70±1.00	16.70	16.70±1.00	16.94	16.70±1.00	16.68	16.60±1.00	16.60	10.90±1.00	11.01	11.30±1.00	11.25	11.30±1.00	11.25	2.80±0.60	2.85	5.50±0.60	5.57	5.50±0.60	5.47	2.90±0.60	3.00
Free Li+	wt%	-	-	-	-	-	-	≤0.0500	0.03	-	-	-	-	-	-	≤2000	1238	≤2700	2013	≤1800	1325	≤0.2	0.13
CO_3^{2-}	wt%	-	-	-	-	≤0.20	0.0896	-	-	-	-	-	-	-	-	-	-	-	-	-	-	≤0.35	0.24
OH^-	wt%	-	-	-	-	≤0.20	0.0762	-	-	-	-	-	-	-	-	-	-	-	-	-	-	≤0.50	0.28
Fe	ppm	≤50	16	≤80	30	≤100	6	≤100	32	≤100	3	≤50	12	≤40	18	≤50	14	≤50	16	≤50	20	≤50	16
Al	ppm	700~1300	954	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cu	ppm	≤30	6	≤50	21	≤30	10	≤20	10	≤50	4	≤20	1	≤50	2	≤50	7	≤50	7	≤50	5	≤50	3
Na	ppm	≤500	135			≤500	119	≤500	40	≤400	121	≤400	205	≤500	225	≤500	78	≤500	129	≤300	129	≤300	50
Ca	ppm	≤200	26			≤200	35	≤200	40	≤50	43	≤150	19	≤100	19	≤200	55	≤200	20	≤200	17	≤200	20
Cr	ppm	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	≤20	1
Mg	ppm	≤200	41	-	-	≤200	22	≤200	60	≤150	23	≤150	30	≤200	35	≤200	20	≤200	57	-	-	≤200	30
Zn	ppm	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	≤20	2	-	-
pH	/	11.00~11.80	11.45	10.80-11.70	11.38	11.00~11.80	11.46	≤12.00	11.14	≤12.00	11.40	10.80~11.60	11.18	≤12.00	11.58	11.60±0.20	11.65	11.60±0.20	11.75	11.40-12.00	11.80	≤12.0	11.65
磁性体（Fe+Cr+Zn）	ppb			≤100	20	100	24.000	≤50	30	≤100	21	≤100	29	≤50	15	≤50	15	≤50	15	≤50	15	≤100	20
単位容量	mAh/g	≥157.0	160.0	≥153	/	≥150	/	≥167.0	170.1	≥180.0	183.7	≥172.0	176.3	≥176	/	≥202.0	205	≥190.0	196.2	≥198.0	200.5	≥198.0	201.0
初期効率	%									≥86.0	88.5	≥86.0	89.1			≥88.0	90.5	≥85.0	87.0	≥88.0	89.5	≥88.0	88.5
容量測定条件		4.25-3.0V・0.2C/0.2C 23±2℃		4.2-3.0V・0.1C/0.1C 25℃		4.2V-3.0V・0.1C/0.1C 25℃		4.3-3.0V・0.1C/0.1C 25℃		4.30-3.0V・0.1C/0.1C 25℃		4.30-3.0V・0.1C/0.1C 25℃		4.3-3.0V, 0.1C/0.1C 25℃		4.25-2.5V, 0.2C/0.2C 25℃		4.3-3.0V, 0.1C/0.1C 25℃		4.3-3.0V, 0.1C/0.1C 25℃		4.25-2.5V, 0.2C/0.2C 25℃	
ROHS	/	EU Standard	OK	EU Standard		EU Standard	/	EU Standard	/	EU Standard	/	EU Standard	/	EU Standard	/	EU Standard	/	EU Standard	/	EU Standard	/	EU Standard	/
SEM像（低倍）																							
SEM像（高倍）