



## BATTERY ELECTRODE COMPOUNDS

### Anode & Cathode

The performance of e-vehicles is defined by the battery. It specifies the range and charging characteristics. Optimum processing of electrode materials directly impacts the cell operation.

#### Applications

- Battery electrodes, mostly Lithium Ion (EV)
  - Anodes
  - Cathodes

#### Compounding requirements

- Product cleanliness and consistency
- Compound homogeneity
- Slurry or preferably dry compounding
- Safe solvent processing

## BUSS Technology

#### Strengths

- + Intense mixing at low specific energy input
- + Continuous, closed, safe and clean system
- + Adjustable shear-gap & prevention of particle grinding

#### Benefits

- ✓ Meet required homogeneity
- ✓ No batch-to-batch variation
- ✓ Performance stability and dry-mixing advantage

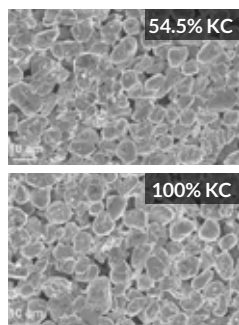


Fig. 1: Scanning electron microscopy (SEM) pictures of graphite particles in anode mixtures, liquid (54.5%) and dry (100%) kneading concentration (KC).

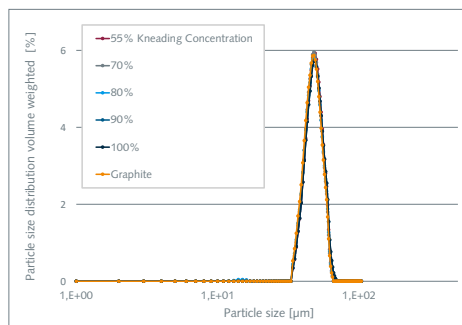


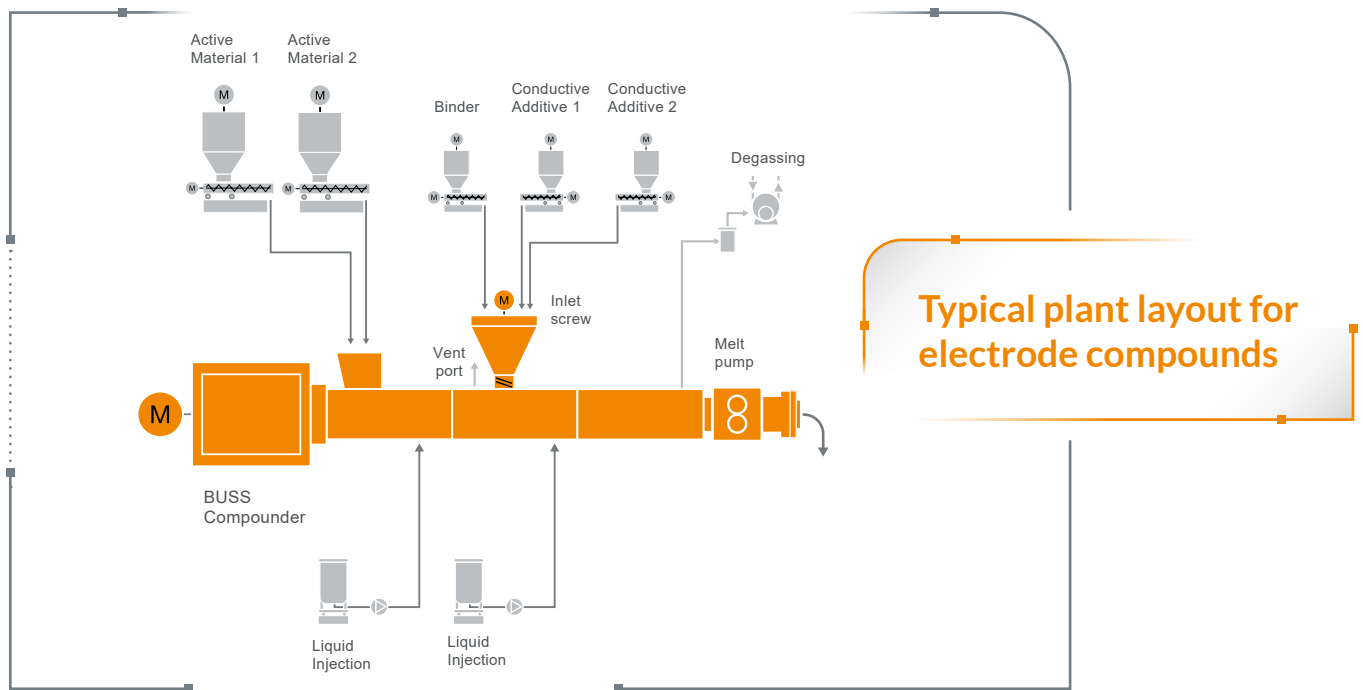
Fig. 2: Particle size distribution for varying kneading concentration (solid content in the blend)

Particle integrity and particle size distribution are perfectly maintained in mixtures with high liquid ratio (KC = 54.5%) and in dry mixtures (KC=100%) as confirmed in SEM pictures (Fig. 1) and the corresponding particle size distribution (Fig. 2).



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	COMPEO LAB	COMPEO 55	COMPEO 88	COMPEO 110	COMPEO 137	COMPEO 176
Screw diameter [mm]	45	55	88	110	137	176
Process Length [L/D]	25	14/18/25	14/18/25	14/18/25	14/18/25	14/18/25
Screw speed max [rpm]	600	600	600	600	600	600
Throughput rate [kg/h] - Slurry	50-150	150-500	600-1900	1000-3500	1800-6000	3500-11500
Throughput rate [kg/h] - Dry	30-90	100-150	350-500	750-1000	1500-2000	3000-4000



**More info!**

[busscorp.com/industries/battery-compounds](https://busscorp.com/industries/battery-compounds)

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