

NUMBER 5630

soteras™ MSi binder

for higher capacity lithium ion batteries

general

Soteras™ MSi binder is a unique binder for high capacity silicon-based anodes in lithium ion batteries. It can easily be processed using standard industry practices.

Soteras™ MSi binder can control swelling, which results in superior cycle performance at capacities greater than 400 mAh/g when used with silicon oxide (SiO_x), silicon composite (SiC), silicon oxide composite (SiO_xC), or silicon graphene (Si-Gr) technologies.

Soteras™ MSi binder is a 2-component system, which can be used to replace conventional CMC and SB binder systems.

physical properties

product name	component	appearance	viscosity (cps)	pH	moisture (%)
Soteras™ MSi binder	MSi-A	white powder	7,000 – 11,000 ¹ (2% aqueous solution)	6.5 – 8.5	0 – 10
	MSi-B	clear liquid	500 – 3,000 ¹ (100% active)	NA	NA

¹Brookfield viscosity, spindle #4 at 30 rpm at 25 °C

key features of Soteras™ MSi binder:

- flexible and strong binder
- functional groups of binder that can interact physically/chemically with Si particles and/or Si/C composites
- compatible with industry processing requirements
- good slurry properties and stability
- electrochemical stability
- superior cycle performance at capacities greater than 400 mAh/g.

Suggested dosage: 2.5 - 5.0 wt% of anode active material, depending on the target capacity.

Ratio: Soteras™ MSi-A (95%): Soteras™ MSi-B (5%).

Soteras™ MSi-B is not a latex.

packaging

Soteras™ MSi-A binder is available in 25 kg drums
Soteras™ MSi-B binder is available in 20-liter drums.

product safety

Read and understand the Safety Data Sheet (SDS) before using this product.