

TRANSPORT

Solvents in electric vehicle battery recycling

Why is the role of solvents essential?

Solvent extraction is a highly effective approach for recovering metals from EV batteries, help enabling 90+% metal recovering rates with 95+% purity. Solvents blends with hydrocarbon solvents extract valuable elements commonly used as cathodes in lithium-ion batteries. In many lithium-ion battery recycling process flowsheets, spent batteries are dismantled, and the parts containing the electrodes, such as battery cells, get crushed or shredded to produce a powdery fraction referred to as “black mass.” This black mass comprises electrode coatings (metal oxides and carbon) and, therefore, contains value elements such as graphite, manganese, cobalt, nickel and lithium. The black mass requires further processing to isolate those elements. This is conventionally done through hydrometallurgy, where metals from the black mass are dissolved and then chemically separated by solvent extraction.

INDUSTRIAL & PROFESSIONAL USE

Benefit Green Deal

Longer lasting products that can be repaired, recycled and re-used



SPOT ON

Aliphatic hydrocarbon solvents

