Procurement Catalogue:

Seeking Quality Materials for Our Recycling Processes

Powering a Sustainable Future:
Closed Loop Battery Recycling Services

EcoNiLi Battery Purchase Catalogue

As a pioneering force in the recycling industry, Econili Battery is delighted to present a comprehensive range of services that encompass the sustainable reclamation of all sorts and sizes of batteries. From lithium-ion **single cells, packs, pouches, and lithium-ion polymer batteries** to modules and all types of **Electric Vehicle Batteries** (EVB), we are dedicated to closing the loop on battery lifecycle management. Explore our expertise in recycling, as well as our insights into the recycling process of essential components like **cathode foils.**

Lithium Cobalt Oxide (LCO) Batteries

As a cornerstone of modern **rechargeable** energy storage, lithium cobalt oxide batteries combine lithium, cobalt, and oxide components, enabling them to **excel in terms of energy density and power.** However, their responsible recycling poses challenges primarily due to the presence of the **precious cobalt** component.

Nickel Manganes Cobalt (NMC) Batteries

Explore the intricate chemistry behind Nickel Manganese Cobalt (NMC) batteries – a dynamic fusion of nickel, manganese, and cobalt elements that drive modern rechargeable energy storage. This composition equips NMC batteries with **remarkable energy density and durability**

Electric Vehicle Batteries - EVB

These batteries predominantly utilize Lithium Iron Phosphate (**LFP or LiFePO4**), Nickel Cobalt Manganese (**NCM**), or Nickel Cobalt Aluminum (**NCA**) chemistries. LiFePO4 batteries employ a cathode made of lithium iron phosphate, ensuring thermal stability and extended lifespan.

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Ni-Mh Batteries

The chemistry of Ni-MH batteries involves an anode crafted from a hydrogen-absorbing alloy and a cathode composed of **nickel oxyhydroxide**. During discharge, hydrogen ions from the anode combine with electrons to create water, while **nickel ions from the cathode facilitate the electrical flow**.

Ni-Cd Batteries

The chemistry of Ni-Cd batteries centers on a **cadmium anode and a nickel oxyhydroxide cathode**. During discharge, cadmium ions from the anode combine with electrons, generating a flow of electricity, while **nickel** ions from the cathode facilitate this process.

LFP Batteries

The chemistry of LFP batteries revolves around an **iron phosphate cathode and a lithium anode**. During discharge, lithium ions migrate from the anode to the cathode through an electrolyte, generating electrical energy.

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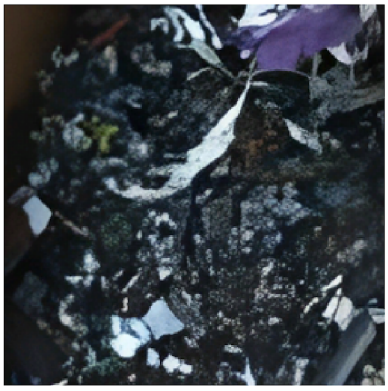
Black Mass & Black Powder (nickel cobalt mixture)

Black mass holds paramount importance as a crucial component meticulously employed in **battery production**. At Econili Battery, we actively engage in the procurement of this essential material.

Shredded Batteries



At Econili Battery we extend our efforts to include the acquisition of shredded lithium-ion batteries, ensuring their proper recycling within our facilities.

Cathode Foils

The chemistry of cathode foil is closely tied to the specific battery chemistry. In lithium-ion batteries, for instance, **the cathode foil contributes to the movement of lithium ions during discharge and recharge** cycles, enabling the energy storage process.

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Lithium Primary Batteries (Non-Rechargable)

Diverse Battery Disposal Solutions at Econili Battery

At Econili Battery, we are committed to providing comprehensive battery disposal solutions that cater to various battery types, including those that do not contain lithium. We understand that environmentally responsible disposal is essential for batteries used in a multitude of applications. Our expertise extends to handling and recycling the following types of batteries:

- **Alkaline Batteries:** These widely used batteries, found in devices ranging from remote controls to flashlights, employ zinc and manganese dioxide as their primary components.
- **Zinc Carbon Batteries:** Found in low-drain devices like clocks, these batteries consist of zinc and manganese dioxide.
- **Silver Oxide Batteries:** These batteries, commonly used in watches and calculators, use silver oxide cathodes and zinc anodes.
- **Mercury Batteries:** While largely phased out due to environmental concerns, mercury batteries historically used zinc anodes and mercuric oxide cathodes.

Lithium-primary batteries encompass a range of chemical compositions, each tailored to deliver specific characteristics and applications. **Lithium-thionyl chloride** (Li-$SOCl_2$) batteries are renowned for their exceptional energy density, making them suitable for long-lasting and high-energy-demanding **devices like medical implants and remote sensors**. **Lithium-manganese dioxide** (Li-MnO_2) batteries offer a balanced combination of energy density and discharge performance, **often employed in devices such as digital cameras and pacemakers**.

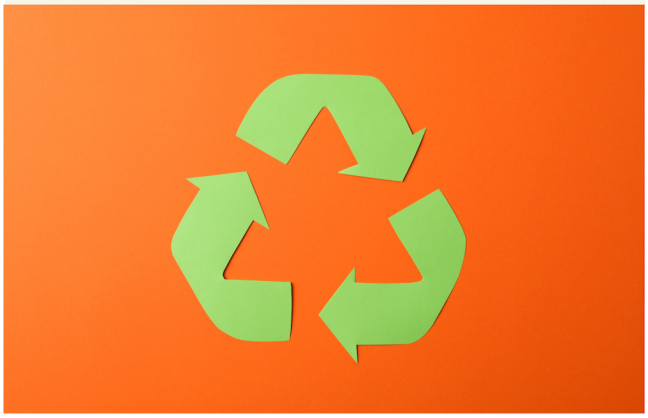
Additionally, **lithium-iron disulfide** (Li-FeS_2) batteries excel in extended shelf life and low self-discharge, rendering them ideal for applications requiring occasional, **reliable bursts of power, such as utility meters and emergency devices.** These diverse chemical compositions underline the adaptability of lithium-primary batteries to various industries and usage scenarios.

We recognize the importance of environmentally conscious disposal for these battery types. At Econili Battery, **we are equipped to handle the responsible treatment and final disposition of these batteries**. If you are a supplier looking to dispose of such batteries, we offer tailored solutions. We accept these batteries for proper treatment and disposal, **provided the supplier covers the logistic and treatment fees according to their country regulation**. Our commitment to sustainability drives our mission to ensure the safe and eco-friendly management of various battery types. Contact us today to learn more about our disposal services and how we can assist you.

About EcoNiLi Battery

Established in 2021, EcoNiLi Battery PTE. Ltd. is dedicated to serving **OEMs, lithium-ion battery collectors, and recycling companies** with a comprehensive suite of services. Our expertise lies in the **acquisition, recycling, reclamation, and refining of metals** from their spent lithium-ion batteries, mixed metal scrap batteries, black powder "nickel cobalt mixture," and shredded spent lithium-ion batteries. **Headquartered in Singapore,** we have strategically positioned facilities across **Asia and Europe** that function as integral components of an efficient end-of-life battery recycling supply chain.

At Econili Battery, we specialize in providing efficient and sustainable solutions for li-ion battery recycling. Our lithium-ion battery recycling equipment is designed to **comply with eco-friendly regulations** while being highly profitable for our customers. We offer quick setup, training, and excellent after-sales services to ensure that our customers can recycle black mass and shredded batteries with ease. Our ultimate goal is to promote a circular economy by **reducing waste and creating a sustainable future**.



CONTACT:

Nathalie Fraga
VP of Global Business Development
Email: *nathalie.fraga@econilib2b.com*
Web: *www.econilib2b.com*
WhatsApp: *+5532998056119*
Skype: *+18654718796*