

# LEAD PRODUCTS

## PROFILE



مصنع سهيل لتدوير البطاريات  
SUHAIL BATTERY RECYCLING FACTORY





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# ABOUT US

**At Suhail Battery Recycling Factory, we specialize in the sustainable collection and conversion of automotive batteries into essential raw materials, such as lead, plastic, and acid. What distinguishes us is our seamless partnership with Suhail Plastic Factory, where we process recycled plastic.**

**This collaboration forms a closed-loop system that ensures environmental responsibility and resource efficiency throughout our interconnected group facilities.**



# ABOUT US

**Suhail Battery Recycling Factory is deeply committed to advancing the responsible recycling of lead-acid batteries, promoting environmental sustainability, and preserving valuable resources.**

**Through our dedication to innovation and adherence to best practices, we lead the industry in efficiently transforming used batteries into high-quality lead metal and alloys. This contributes to cleaner and more eco-friendly manufacturing processes.**

**Our expertise, unwavering commitment to safety, and focus on waste reduction position us as a trusted partner in the journey towards a more sustainable and environmentally responsible future. Join us in making a positive impact and advocating for a greener planet.**





# **OUR PRODUCTS**

**Our lead-acid battery recycling plant specializes in the environmentally responsible and efficient recycling of lead-acid batteries, and it offers several valuable products and by-products as a result of its recycling processes:**



# **1. LEAD METAL**

**The primary product of a lead-acid battery recycling plant is high-quality lead metal. This lead is used in a wide range of applications, including the manufacturing of new batteries, and various industrial products.**



## **2. LEAD ALLOYS**

**Lead-acid battery recycling also yields lead alloys, which are created by mixing lead with other metals like antimony, calcium, or tin. These alloys have diverse industrial applications, such as in the production of grid plates for batteries and radiation shielding.**



# **3. POLYPROPYLENE PLASTIC**

**During the recycling process, the plastic casings of the batteries are separated and processed into polypropylene plastic granules.**

**These granules can be used in the production of new plastic products, such as containers, automotive parts, and more.**





# **4.SULFURIC ACID**

**The recycling process also generates sulfuric acid, which can be reprocessed or neutralized for various industrial uses, including as a raw material in the production of detergents, chemicals, and fertilizers.**

# **SUSTAINABILITY**

**These products, along with the our commitment to sustainability and environmental responsibility, make lead-acid battery recycling an essential and eco-friendly industry.**

# **PRODUCTION METHOD**

## **1. Battery Collection**

**The process begins with the collection of used lead-acid batteries from various sources, such as automotive and industrial equipment. These batteries are then transported to the recycling facility.**

## **2. Battery Sorting and Segregation**

**At the plant, the batteries are carefully sorted to separate them into different categories based on size, chemistry, and other characteristics. This segregation helps streamline the recycling process and ensures that each type of battery is treated appropriately, and no other scrap material is mixed with the batteries.**

## **3. Battery Preprocessing**

**Before recycling, the batteries undergo preprocessing, which involves the removal of external materials, such as labels and accessories. This step prepares the batteries for the main recycling process.**

#### **4. Battery Breaking**

**The batteries are mechanically broken down into smaller pieces,. This step aims to separate the lead-containing components from non-lead materials.**

#### **5. Lead Extraction**

**After breaking down the batteries, the lead components, which include lead plates and terminals, are separated from other materials.**

#### **6. Polypropylene Plastic Separation**

**The plastic casings of the batteries are separated and processed further into polypropylene plastic granules, which can be used for various applications in “Suhail Plastics Factory”**

#### **7. Sulfuric Acid Neutralization**

**The sulfuric acid from the batteries is neutralized to render it safe.**

## **8. Lead & Lead Alloy Production**

**The extracted lead is processed further to create lead alloys, which are valuable for their specific properties in different industrial applications, such as battery manufacturing.**

## **9. Environmental Compliance**

**Throughout the process, the plant adheres to strict environmental regulations and safety standards to minimize emissions, reduce waste, and ensure the responsible management of hazardous materials.**

## **10. Quality Control**

**Quality checks are conducted at various stages to ensure the purity and quality of the recovered materials, ensuring that they meet industry and regulatory standards.**

## **11. Product Shipment**

**Finally, the recycled lead, lead alloys, and other recovered materials are packaged and shipped to manufacturers and industries that use these materials to produce new batteries and other products.**

# **LEAD REFINING PROCESS**

### **1. Lead Extraction**

**After the batteries are broken down and the lead components are separated, they are sent to the lead smelting furnace. This furnace is designed to handle the melting of lead and other materials with precision.**

### **2. Furnace Operation**

**The lead smelting furnace operates at high temperatures to melt the lead materials. Various fluxes and additives may be introduced to help remove impurities and improve the quality of the molten lead.**

### **3. Separation of Impurities**

**During the smelting process, impurities, such as slag, dross, and other non-lead materials, rise to the surface and are removed, leaving behind pure molten lead.**



#### **4. Refining and Alloying**

**Depending on the intended use, the molten lead may undergo additional refining and alloying steps to achieve the desired specifications and properties. This can involve the addition of specific alloys to create lead with specific characteristics.**

**5. Casting and Solidification: Once the lead is of the desired purity and composition, it is cast into molds to form lead ingots or other shapes. These ingots can then be used for a variety of industrial applications, including the manufacturing of new batteries and other lead-based products.**



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