U.S. Borax

U.S. Borax's roots stretch back to 1872 when company founders began mining borates in Nevada. These pioneers discovered borates in Death Valley in 1881 and used teams of 20 mules and giant wagons to haul them 165 miles to the nearest railroad in Mojave, California. The 20 mule teams hauled borates for only five years, but *20 Mule Team*® Borax lives on as one of the most recognized brands in the United States.

In the early 20th century, mining operations moved to Boron, California, home to one of the largest and highest quality borate deposits in the world. What began as an underground mine in 1927 was transformed into an open pit mine in 1957. Today, the mine is the largest open pit mine in the state and supplies around 30% of the world's demand for refined borates. In addition, we have shipping and refining facilities in the Port of Los Angeles and Coudekerque, France. Our operations also includes shipping, storage, and sales locations throughout the Americas, Europe, and Asia.

U.S. Borax is 1,000 people serving our customers with more than 1,200 delivery locations globally. We are known for our leadership in developing borates' potential and our world class safety, environmental, and community practices.

Leading the industry in borate supply and science

U.S. Borax is a leader in research and innovation. Our experts understand the uses of borates and boron benefits in a number of industries and environments.

Borates are key ingredients in a wide variety of products including glass and fiberglass; ceramics; agricultural micronutrients; wood preservatives; flame retardants; and batteries. While borates are everywhere in the environment, commercially viable deposits are very rare. We mine borate ore at a rate of about 3 million tons per year and produce about 1 million tons of refined products annually.





Mining technology

The mining process starts with drilling to sample the type and purity of the ore. Information derived from drilling is used to develop long-term mine plans. We use explosives to blast loose the overburden—sandstone that covers the deposit—which is removed by electric shovels that lift 80 tons per load. Haul trucks—equipped with a GPS satellite system to ensure safety and efficiency—transport the overburden and ore. Each haul truck costs around $5 million (USD) and can carry 240 tons of material.

Refining technology

Ore from the mine is crushed to increase the surface area, dissolved in a hot solution of water and borates, and screened to remove any remaining impurities. This saturated borate solution is pumped into large settling tanks—called thickeners—then transported to crystallizers for cooling. The drop in temperature forces the borates to crystallize. From there, borates are filtered, dried, and transported for packing, storage, and shipping. At each stage of the process, we test borate samples for quality at on-site laboratories, allowing for instant analysis and adjustments.

Process and product innovation

Most of the operational processes that set the standard for borate production were developed or first adopted by U.S. Borax. Our experts work closely with our customers to increase their operational productivity, product quality, and environmental standards. We conduct or commission independent research to advance society's understanding of borates' properties and potential. The results of this research lead to new products and processes that increase agriculture yields as well as lower energy use and emissions in manufacturing processes.

Leading the industry in sustainable development

U.S. Borax's success spans three centuries—an achievement that rests on our ability to meet or exceed expectations. Our approach to sustainable development is guided by our purpose: Providing the refined borates the world needs a more equitable and sustainable future for people and the planet. We are committed to operating in a socially, environmentally, and economically responsible manner.

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Health and safety leadership

We believe every employee, contractor, and visitor to our site deserves a safe working environment. U.S. Borax strictly adheres to all workplace safety laws in the areas in which we operate. Our entire workforce attends regular safety meetings and discussions pertinent to individual job duties. We are all empowered to say something if we see something wrong. In addition, our workplace should be respectful and inclusive for everyone. Since March 2021, we have worked to better understand, prevent, and respond to harmful behaviors across our global operations.

Environmental stewardship

Since 1916, when we began lobbying for the national protection of Death Valley, U.S. Borax has been a conservator of our local environment. In June 2023, Boron Operations became the first open pit mine in the world to transition its heavy machinery from fossil diesel to renewable diesel. The change to renewable diesel brings an anticipated CO_2 equivalent reduction of up to 45,000 tonnes per year, comparable to eliminating the annual emissions of approximately 9,600 cars.

The operation has also lowered its water use by millions of gallons through recycling—a critical goal given California's drought cycle. We openly disclose how much surface water we're allocated and how much we're using.

The Boron site has been repeatedly honored with Solid Waste Reduction Awards from the California Integrated Waste Management Board. U.S. Borax was also the first mining company to receive the Governor's Economic and Environmental Leadership Award.

Community partnership

Our goal is to create value for local economies and to partner with our communities.

Every year in California, U.S. Borax:

- Contributes $15 million to the California tax base
- Provides almost 1,000 jobs with a combined payroll of $100 million
- Purchases of $150 million in local goods and services
- Contributes up to $200,000 to fund programs that support local communities in the areas of education, environmental stewardship, health and well-being, recreation, and cultural heritage

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Our global reach

Boron Operations is the heart of a global business including specialty refineries, shipping facilities, and a global network of warehouses and stock points.

U.S. Borax serves our customers with more than 1,200 delivery locations globally. The company is acknowledged for its leadership in developing borates' potential and its world class safety, environmental, and community practices.

- **Boron, CA, USA**
  Primary mine, refining, packaging, and laboratory
- **Changshu, Jiangsu, China**
  Shipping facility
- **Chicago, IL, USA**
  Americas headquarters
- **Coudekerque, France**
  Refining and shipping facility
- **Frankfurt, Germany**
  European headquarters
- **New Delhi, India**
  Sales and customer service office
- **Nules, Spain**
  Packaging and shipping facility
- **Owens Lake, CA, USA**
  Trona mine
- **Rotterdam, Netherlands**
  Warehouse and shipping facility
- **Shanghai, China**
  Sales office
- **Singapore**
  Asia-Pacific headquarters
- **Wilmington, CA, USA**
  Refining and shipping facility