



BIRLA CARBON

NAATBatt Member Update 2022





ADITYA BIRLA GROUP



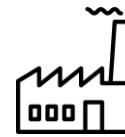
PREMIUM GLOBAL
CONGLOMERATE
adityabirla.com

THE ADITYA BIRLA GROUP



INFRASTRUCTURE

50 companies in 36 countries across 6 continents.



TECHNOLOGY

130+ state-of-the-art manufacturing facilities.



DIVERSE TALENT

120,000+ employees representing 42 nationalities.



FISCAL STRENGTH

US \$46 Billion in revenues – 50% from international operations.

✓ ACRYLIC FIBERS	✓ AGRI-BUSINESS	✓ CARBON BLACK	✓ CEMENT	✓ CHEMICALS
✓ FINANCIAL SVCS.	✓ INSULATORS	✓ METALS	✓ MINING	✓ PULP & FIBER
✓ RETAIL	✓ TELECOM	✓ TEXTILES	✓ FEEDSTOCK TRADING	

BIRLA CARBON



- Emerging materials strategy and focus
- Full carbon material portfolio including graphites and conductive additives
- Global sales and technical service footprint
- Large / well-equipped research and development organization
- Synergistic product integration and feedstock supply security with sister ABG companies providing a distinct advantage

BIRLA CARBON has been serving a global customer base for **more than 150 years** – with an annual carbon black production capacity exceeding **2 Million** metric tonnes across **100+ unique grades**. With a team of more than **2,400 people**, BIRLA CARBON operates in **12 countries** on **5 continents** across **16 different plants** – including **2 state of the art** research centres in the US and India.



SHARE THE STRENGTH

BIRLA CARBON ENERGY SYSTEMS

Unique solutions to the expanding Li-ion battery market



Our carbon portfolio includes both conductive additives and anode active materials

Conductex™ e

Performance Additives

Full portfolio of **carbon blacks for advance lead-acid batteries** enabling enhance performance for all applications

Conductex™ i14

Performance Additives

Next generation carbon black enables **8% higher solids loading** in electrode slurries and **superior high rate and high voltage performance**

CB/CNT Hybrid

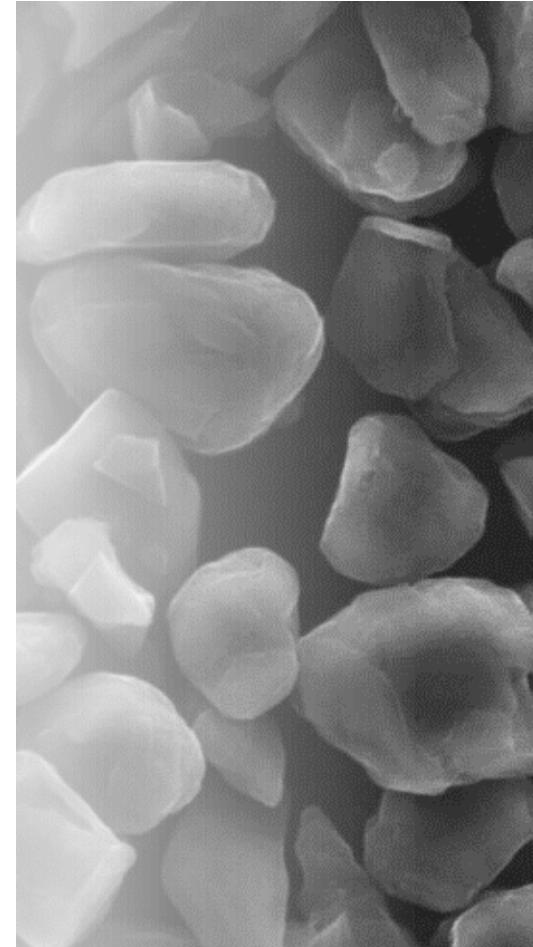
Conductive Additives

Pre-dispersed systems of CB/CNT enables **ease of mixing and good electrode properties at lower loading** compared to competitive carbon black

Graphite

Anode Active Materials

Market-ready graphites have been evaluated and sampled as a first anode active material product line for Birla Carbon



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INDUSTRY LEADING SUSTAINABILITY

Net zero by 2050

As leaders in carbon black manufacturing, we are committed to growing more sustainably wherever possible. Following a natural progression our circularity and Life Cycle Assessment approach, we are pledging our lower carbon emission to net zero, a first in the industry.

We were awarded a **Gold Rating** by EcoVadis for the fifth consecutive year.



Global recognition

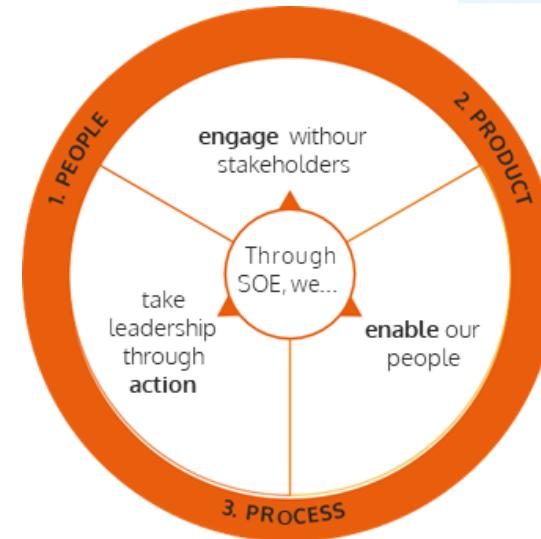
Sustainable Operational Excellence (SOE)

SOE is our sustainability strategy. It influences every decision we make, from designing and operating our plants to interacting with our customers, our employees and the communities in which we operate.

Forging Circularity

Circular thinking guides our approach to innovation as we respond to a growing demand for sustainability. We quantify our environmental impact throughout the life cycle of our products, from raw material extraction to end of life.

Leading the way for the industry, we have achieved circularity at scale with our Continua™ offering.



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TECHNICAL CENTERS AND RESOURCES



BIRLA CARBON TECHNOLOGY CENTER – MARIETTA, GA

- Staffed with 50+ researchers and technicians including 20 PhDs
- Full suite of nanomaterials characterization equipment including a world class electron microscopy facility.
- Coin cell assembly and testing laboratory for material screening.
- Complete applications testing for rubber, plastics, inks, and coatings to provide customer solutions.
- Partners with external testing labs for large-format battery performance characterization.



ADITYA BIRLA SCIENCE & TECH CENTER – TALOJA, INDIA

- State of the art research facility (320,000 ft²) to support all businesses within the Aditya Birla Group.
- Staffed with Indian and international PhDs.
- Recognized by the Department of Scientific and Industrial Research (DSIR) of India.
- Includes a dedicated materials and application laboratory for Birla Carbon.

Regional Formulation Support Labs – Korea and Brazil



SHARE THE STRENGTH

ABOUT BIRLA CARBON

At Birla Carbon, we've been sharing our knowledge for over a century, forging new pathways and finding new solutions. From learning the true structure of carbon black through the lens of an electron microscope, to sharing best practices around the globe, we push beyond the known to create new techniques and applications. We work with each other, for each other, creating value for our customers by being a partner of value. As a family, we take a generational view, making decisions for the long-term, our gaze just past the horizon.

As an ardent practitioner of sustainable development, Birla Carbon's Sustainable Operational Excellence (SOE) strategy focuses on employee safety, environmental stewardship, efficient use of carbon sources and a key focus on conducting operations in a socially and ethically responsible manner. In 2021, Birla Carbon was awarded a Gold level rating for sustainable practices for the fifth consecutive year by Ecovadis.

Birla Carbon's Purpose, Share the Strength, is about balanced and shared leadership, working at the product level to innovate cutting edge solutions, through collaboration with its people, customers and communities and backed by knowledge built over a century.



**SHARE THE
STRENGTH**

Dr. Ann Schoeb

Chief R&D Officer

Business Leader, Energy Systems

Email: ann.schoeb@adityabirla.com

Phone: +1 770 792 9575

Regina Prioli

Global Commercial Leader

Energy Systems

Email: regina.prioli@adityabirla.com

Phone: +1 770 792 9657

Dr. Zachary Combs

R&D Director

Energy Systems

Email: zachary.combs@adityabirla.com

Phone: +1 770 792 9691



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