

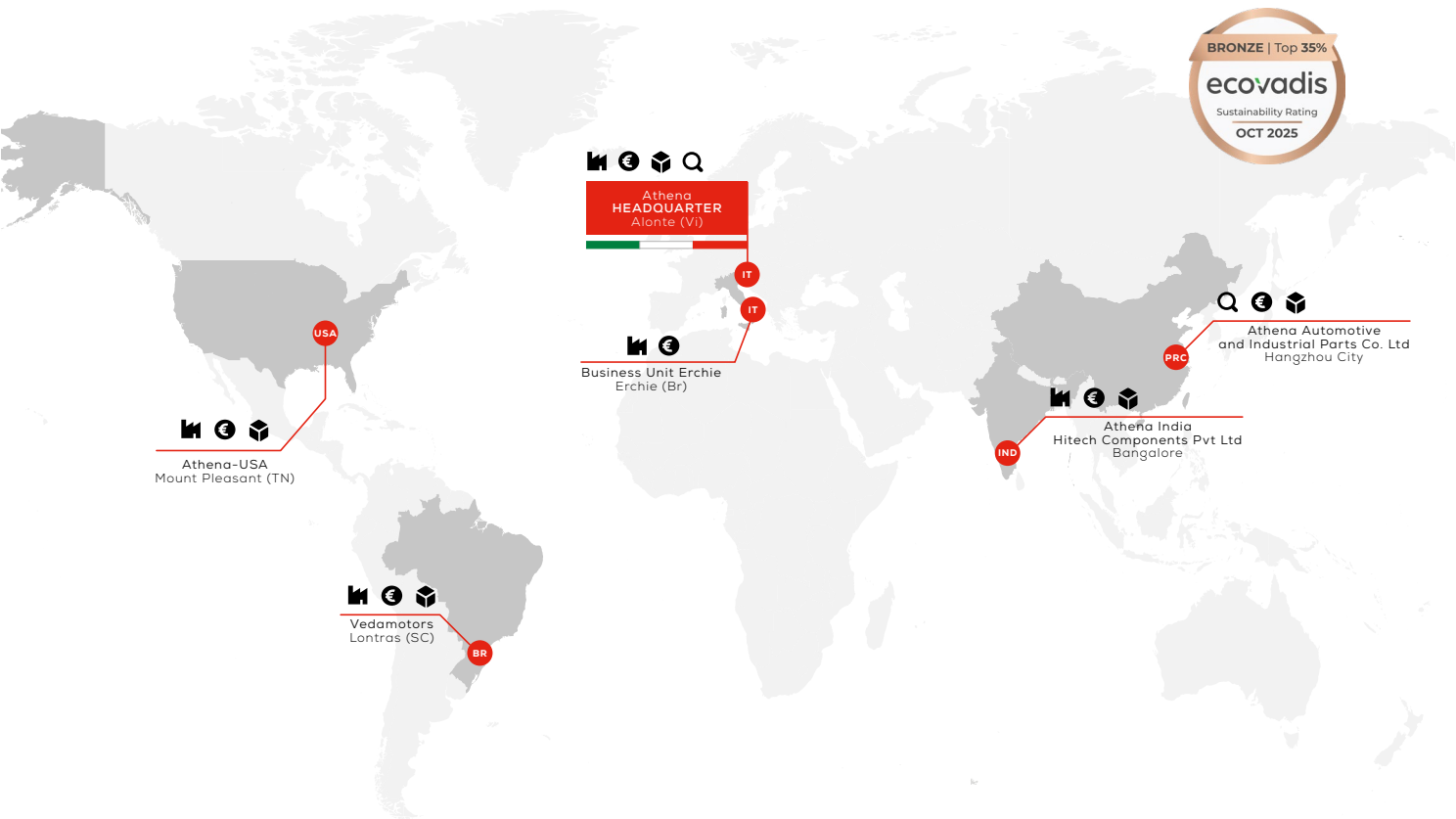


OEM SEALING & INSULATION FOR BATTERY SYSTEMS

**ADVANCED TECHNOLOGIES.
MADE-TO-FIT SOLUTIONS.**

THE IDEAL PARTNER FOR EVERY MANUFACTURER

Athena is a **family-owned** Italian company with a **strong global presence**, known for its consistent commitment to **quality** and **sustainable innovation**.



900+
EMPLOYEES WORLDWIDE

Manufacturing plants  Logistics hubs 
Strategic sourcing centers  Sales offices 

WHY CHOOSE ATHENA

With over 50 years of experience, Athena excels in the design and production of sealing systems and OEM technical articles, providing high-performance and reliable customised solutions for various industrial sectors, including the automotive and energy storage industries.



RESEARCH, CO-DESIGN, AND
CUSTOMISED PRODUCTION



FINANCIAL RELIABILITY
CERTIFIED BY CRIBS



IATF AND ISO QUALITY
CERTIFIED



GLOBAL PRODUCTION
CAPACITY



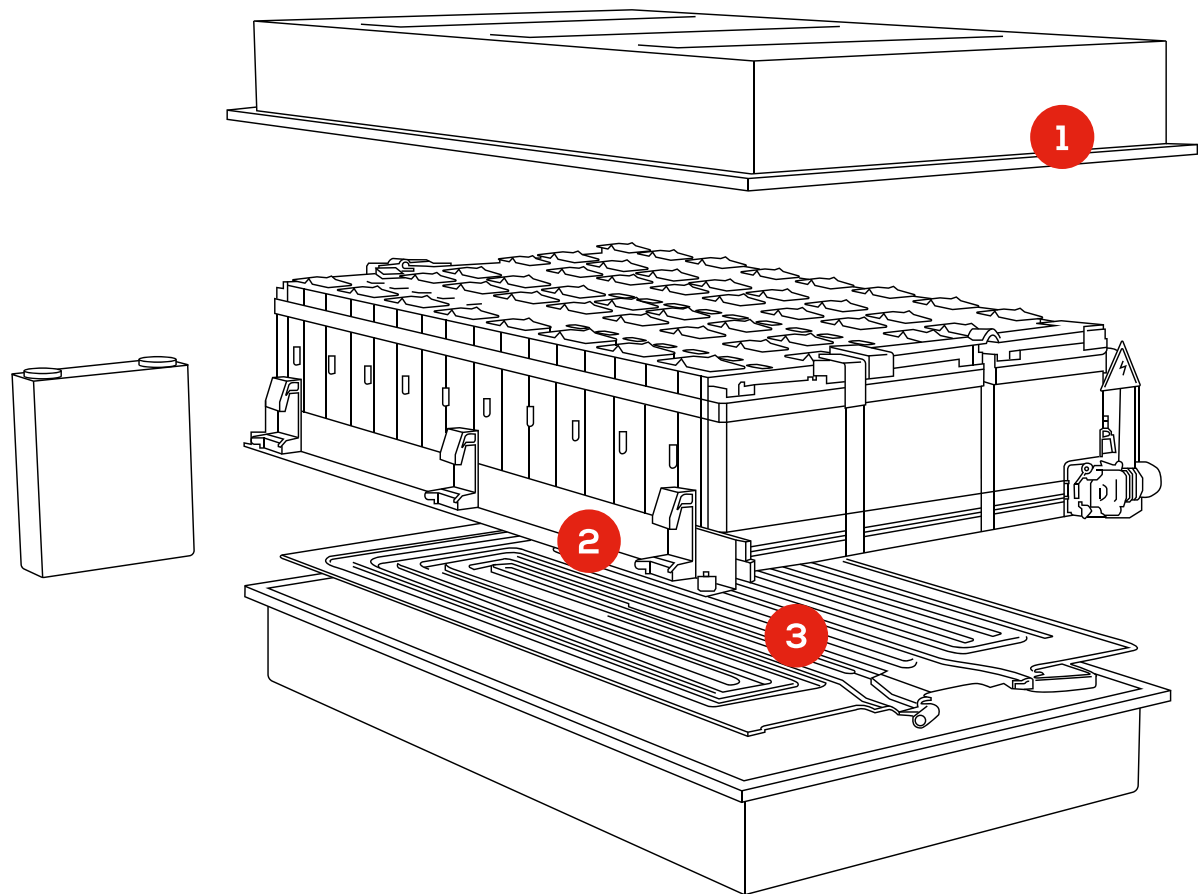
SOCIAL RESPONSIBILITY &
CARBON FOOTPRINT



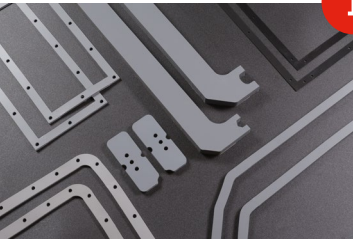
+ 50 YEARS OF RESEARCH
AND KNOW-HOW

INSULATION, GASKETS AND PADS FOR EV BATTERY SYSTEMS

We design and manufacture **custom gaskets, insulators and pads** for **electric vehicle battery systems**, including Athena's **Silcafire ATH-10, ATH-11 and ATH-20** silicone materials, engineered for reliable protection, insulation and thermal performance.



Material	Application	Function
Silcafire ATH-10	Battery pack perimeter sealing and cover-to-tray interfaces	Environmental sealing, compression sealing and tolerance compensation
Silcafire ATH-10	Internal venting paths and gas routing interfaces	Sealing, moisture protection and contaminant control
Silcafire ATH-10	Cell compression areas	Compression management, cushioning, vibration damping and pressure distribution
Silcafire ATH-11	Cell-to-cell and inter-module barriers	Flame spread delay and thermal propagation control
Silcafire ATH-11	Module sidewalls and internal protective barriers	Thermal insulation, flame protection and thermal shielding
Silcafire ATH-20	Thermal interfaces to cooling plates	Heat transfer to the cooling system and electrical insulation



SilicaFire ATH-10 SERIES Silicone Foam Gaskets

Flexible silicone foam gaskets for thermal insulation, flame protection and shock absorption. Ideal for battery pack applications, they combine self-extinguishing performance with resistance to extreme temperatures, water, UV, ozone and weathering.

Main Features:

- Customizable product shapes, thickness and density
- Optimal insulation performance, with thermal conductivity (λ) ranging from 0.06 to 0.15 W/m-K
- Flame retardant performance certified to UL 94 V-0 and HF-1 standards
- Temperature range: $-60^{\circ}\text{C} \sim +250^{\circ}\text{C}$
- Cushioning & shock absorption capabilities
- Waterproof

Density: 200 ~ 1000 kg/m³

Thickness: 0,5 mm ~ 30 mm



SilicaFire ATH-11 SERIES Ceramic Silicone Foam Gaskets

Designed for the most critical conditions, our ceramic silicone gaskets offer outstanding fire resistance and help provide valuable evacuation time in emergencies, including up to 10 minutes under direct flame, while maintaining excellent insulation and durability.

Main Features:

- Customizable product shapes, thickness and density
- Extreme Fire Resistance: Withstand direct flame (800°C) for up to 10 minutes resistance
- Exceptional thermal insulation performance, with a thermal conductivity (λ) ranging from 0.06 to 0.15 W/m-K
- Flame retardant performance certified to UL 94 V-0 and HF-1 standards
- Cushioning & shock absorption capabilities
- Waterproof

Density: 450 ~ 1000kg/m³

Thickness: 0,5 mm ~ 10 mm



SilicaFire ATH-20 SERIES Thermal Conductive Silicone Pads

Built to move heat away efficiently, our thermally conductive silicone pads supports safer, more reliable battery performance. They also combines self-extinguishing behavior, strong dielectric strength and double-sided self-adhesive ease of assembly.

Main Features:

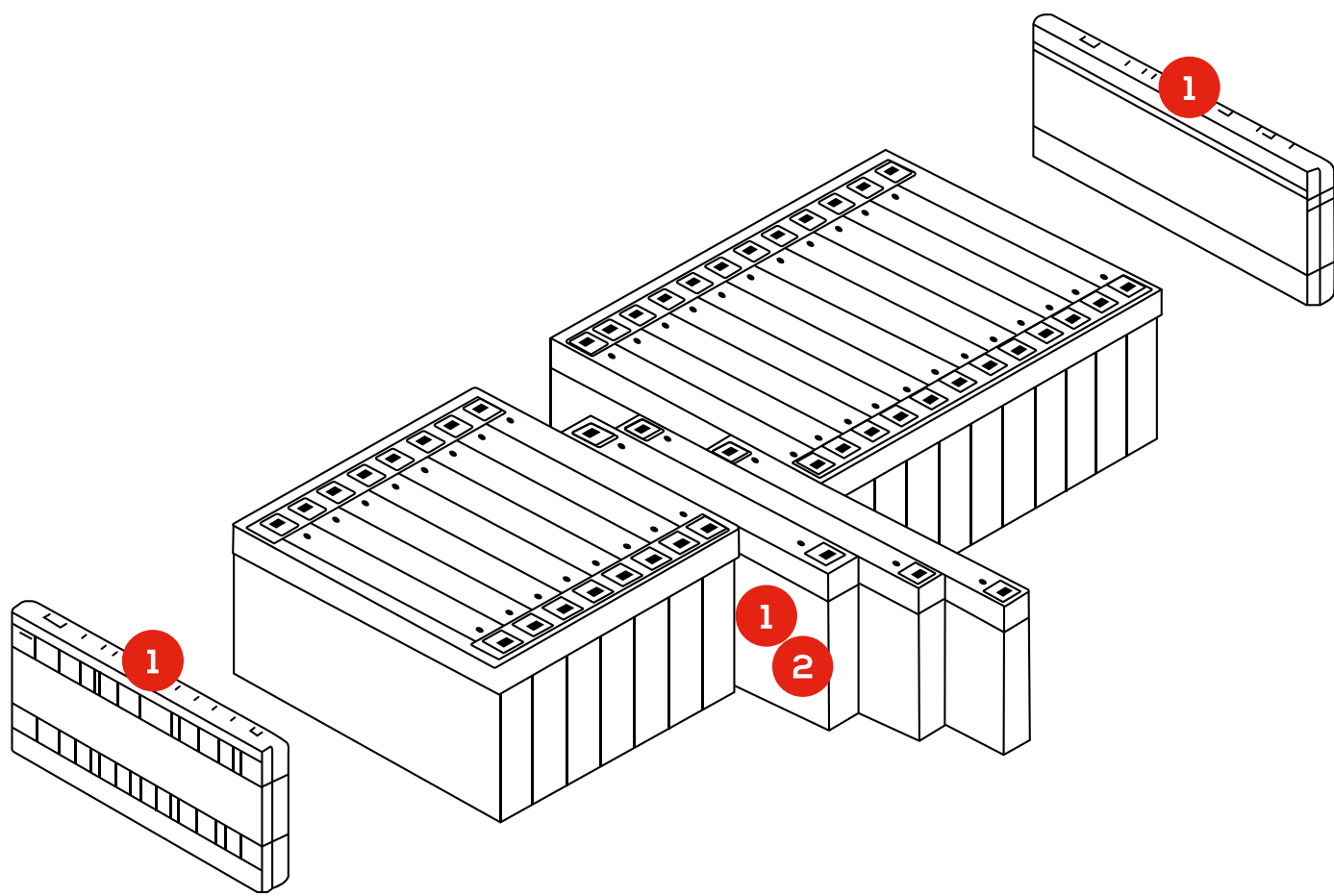
- Customizable product shapes, thickness and density
- Optimal dielectric strength with a withstand voltage of 6 ~ 12 kV/mm
- Provides excellent thermal conductivity, ranging from 1.5 ~ 10 W/m-K
- Classified as UL 94 V-0 for flame retardancy
- Self-adhesive surface on both sides

Density: 2,1 ~ 2,5 g/cm³

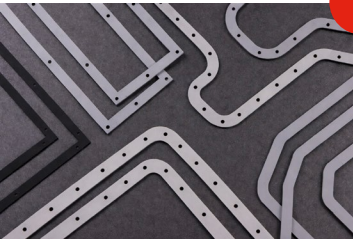
Thickness: 0,15 mm ~ 5 mm

INSULATION, GASKETS AND PADS FOR ENERGY STORAGE BATTERY SYSTEMS

Engineered for **energy storage battery systems**, our custom **gaskets, insulators** and **pads** are developed from customer drawings and supported by technical expertise, with solutions available in Athena's **Silicafire** ATH-10 and ATH-11 silicone materials or in rubber to ensure reliable **sealing, effective insulation** and long-term **durability**.



Material	Application	Function
Silicafire ATH-10	Battery pack perimeter sealing	Compression and environmental sealing
Silicafire ATH-10	Pack cover-to-flange interface	Compression sealing
Silicafire ATH-10	Module-to-module contact areas	Insulation, cushioning and vibration damping
Silicafire ATH-11	Outer walls of battery modules	Thermal insulation and flame protection
Silicafire ATH-11	Barriers between modules	Delay of flame spread and thermal propagation
Silicafire ATH-11	Safety-critical pack areas	Fire protection and thermal shielding



1

SilicaFire ATH-10 SERIES Silicone Foam Thermal Barriers

For energy storage systems, ATH-10 delivers **reliable environmental sealing** where long-term **durability** is critical. Ideal for enclosures, pack perimeters and cover interfaces, it helps block water, dust and weather while adding.

Main Features:

- Customizable product shapes, thickness and density
- Optimal insulation performance, with thermal conductivity (λ) ranging from 0.06 to 0.15 W/m·K
- Flame retardant performance certified to UL 94 V-0 and HF-1 standards
- Temperature range: -60°C ~ +250°C
- Cushioning & shock absorption capabilities
- Waterproof

Density: 200 ~ 1000 kg/m³

Thickness: 0,5 mm ~ 30 mm



2

SilicaFire ATH-11 SERIES Ceramic Silicone Thermal Barriers

For the most safety-critical areas in energy storage systems, ATH-11 helps **delay flame spread and thermal propagation**. Ideal for module sidewalls, inter-module partitions and protective barriers, it supports **safer emergency response** and system protection.

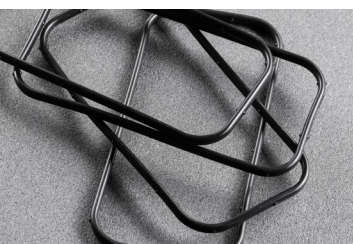
Main Features:

- Customizable product shapes, thickness and density
- Extreme Fire Resistance: Withstand direct flame (800°C) for up to 10 minutes resistance
- Exceptional thermal insulation performance, with a thermal conductivity (λ) ranging from 0.06 to 0.15 W/m·K
- Flame retardant performance certified to UL 94 V-0 and HF-1 standards
- Cushioning & shock absorption capabilities
- Waterproof

Density: 450 ~ 1000 kg/m³

Thickness: 0,5 mm ~ 10 mm

OTHER SOLUTIONS FOR ENERGY STORAGE



RUBBER-MOULDED GASKETS & TECHNICAL COMPONENTS

Specific Compounds for Inverter Applications

Athena offers **custom-molded rubber gaskets and technical components** engineered to match specific geometries, operating conditions and sealing requirements. Available in **EPDM, peroxidecured EPDM, NBR, HNBR and FKM**, they are suitable for many applications, helping preserve IP performance, resist fluids and environmental agents, compensate damp vibration.

Main Features:

- Custom-molded gaskets and technical rubber components for specific geometries and sealing requirements
- Available in EPDM, EPDM PEROX, NBR, HNBR and FKM
- Suitable for multiple sealing, protection and damping applications
- Resistance to water, dust, humidity, coolants, oils and contaminants
- Tolerance compensation and vibration damping for improved sealing performance

OUR EXPERTISE & KNOW-HOW

| R&D SERVICES



CUSTOMIZED GASKETS

We design and manufacture **custom gaskets and insulators** in materials such as rubber-coated sheet metal, rubber, and silicone, to meet specific application requirements. We work closely with our clients in a **co-design process** to develop optimal solutions, ensuring **high performance and durability** in every application.



IMPROVED PROTECTION

Silicafire gaskets **protect the internal components** of batteries, **improve mechanical strength**, and ensure **thermal stability**. Silicafire insulation materials provide fire resistance and enhance efficiency, while thermoconductive materials optimize thermal management, reducing the risk of damage from overheating.



FEA ANALYSIS

Through Finite Element Analysis (FEA), we provide a range of **simulation solutions** to assess the system's complexity, considering applied **loads** and specific **operational conditions**, thereby ensuring the achievement of the client's defined performance and design objectives.



RAPID PROTOTYPING

Leveraging our advanced **laser cutting, molding, waterjet cutting, and cutter technologies**, we offer rapid prototyping services that significantly reduce development and testing times for new products.

| QUALITY CONTROL

Quality system management is crucial for Athena, as it allows us to **optimize processes, increase organizational efficiency** and to ensure consistent delivery of **high-quality products and services**.



INTERNATIONAL SITES FOR THE INDUSTRIAL SECTOR



ATHENA HQ

Via Delle Albere, 13,
36045 Alonte - Vicenza (Italy)
+39 0444 727272
commerciale@athena.eu



VEDAMOTORS

Rodovia BR 470, 2795 - KM 129
Lontras - SC - 89.182-000 - Brasil
vedamotors@vedamotors.com.br
+55 47 3411-0500



ATHENA INDIA HITECH COMPONENTS PVT LTD

20B, 2nd Main, 2nd Phase Peenya Industrial Area
Bangalore 560058 - India
info@athena-india.com
+91 80 28395085



ATHENA HANGZHOU AUTOMOTIVE AND INDUSTRIAL PARTS CO.LTD

W2-2-2, Wanchuang Zhigu industrial park, No. 26
of 22th avenue, Baiyang Street, Qiantang District,
Hangzhou, China
l.bonazzi@athena-hangzhou.cn
+86 0571 8776 1085



ATHENA USA

1540 B North Main St.
Mount Pleasant, TN 38474 - USA
sales@scegaskets.com
800 427 5380



athena.industries
FIND OUT MORE

AthenaGroup  

athena **industries** 