

HIGHEST PERFORMANCE,
INNOVATIVE SILENCING.





01 *Conventional damping materials rot due to high thermal stress and are blown out afterwards*



02 *The super-tough material withstands temperatures of 1000°C and above*

INNOVATIVE ALLOY METAL FOAMS

ALANTUM develops, produces and distributes alloy metal foams based on nickel or iron. Of special interest is the fact that due to a unique patented manufacturing process, the innovative ALANTUM alloy foams combine a number of hitherto unrealized properties. They are advanced high-tech materials that meet today's greatest demands and tomorrow's major challenges.

IMPRESSIVE SOLUTION

With its innovative alloy metal foams, ALANTUM offers the perfect solution for silencing the exhausts of powerful sports or racing cars. This is because the high-tech materials reduce the exhaust sound level at least as well as conventional materials. They also continue to operate at peak efficiency across the entire life of the vehicle. Moreover, the open-pore structure of ALANTUM alloy metal foams gives a high degree of permeability. Silencing of this kind therefore contributes to the high power output of such engines.

HIGH-PERFORMANCE SILENCERS

Silencers for high-power sports cars, motorcycles or yachts must fulfill high demands: Silencing must be adequate and should maintain high engine power output. At the same time, the mid- or rear-engine constructions often to be found in sports cars place special demands on silencer durability. Due to the vehicle construction, the exhaust system is extremely short, and the silencers are exposed to enormous temperatures and very extreme gas pulsations. Conventional damping materials such as steel wool or glass fiber cannot operate under such conditions over a long period, what leads to increasing sound emission levels over lifetime.



03 ALANTUM silencer with absorber consisting of several layers of heat- and corrosion-resistant alloy foam

HIGH-QUALITY BASE, INTELLIGENT SURFACE TREATMENT PROCESS

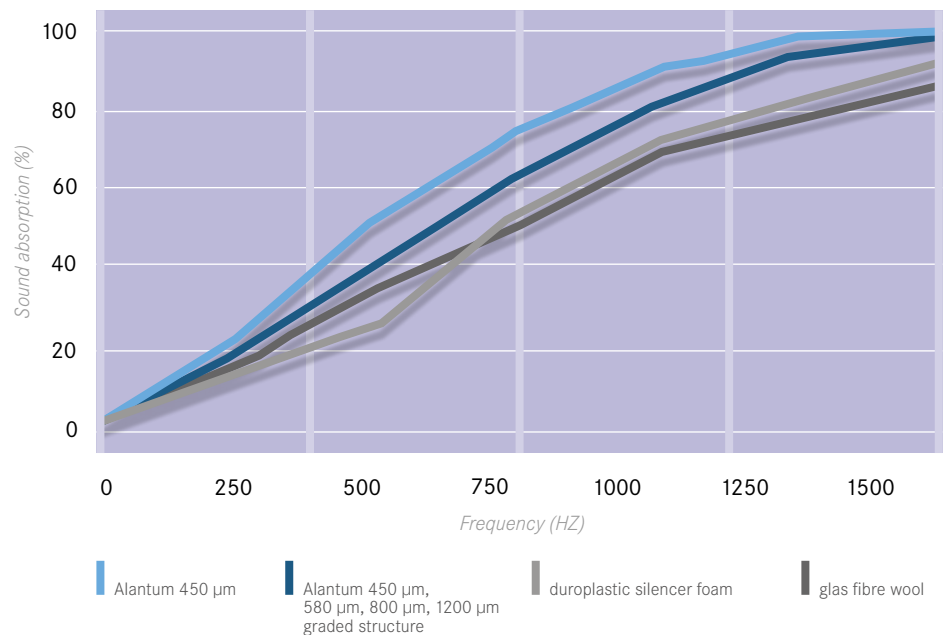
ALANTUM alloy metal foams are based on the use of nickel or iron sheets. Even these basic products offer considerable benefits: They are light in weight, have an open-pore structure and possess a large surface area from the outset. The metal foam sheets first become true multi-talents, however, when subjected to the ALANTUM-patented stable surface treatment process using high-alloy metal powders. In the course of this sintering process, a homogeneous structure is created, with a 30 to 50 percent larger surface area.

STRIKING PROPERTIES:

- Highly temperature resistant – can handle peaks of up to 1200°C
- Extremely stable structure – fatigue-proof for the entire life of the vehicle
- Outstanding sound absorption due to the extremely large surface area of the material
- Highly permeable, maintains high engine power output

EASY TO HANDLE

To serve as materials for silencer construction, the metal foam sheets are simply rolled up into ‘candles’ with an exactly defined duct in the center through which the exhaust gas flows. The candles can be easily integrated into silencer bodies made from stainless steel, Inconel® or any other suitable material. ALANTUM can support its customers in subsequent manufacturing steps, and also offers solution know how to help customers meet their requirements.



04 Excellent silencing: The high frequencies that are particularly unpleasant to the human ear are especially well filtered out by the ALANTUM alloy metal foams. The deep growl so typical of a sports car is retained at the desired level

SOLUTIONS WITH METAL FOAM

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