ISOLITE
High Temperature Solutions

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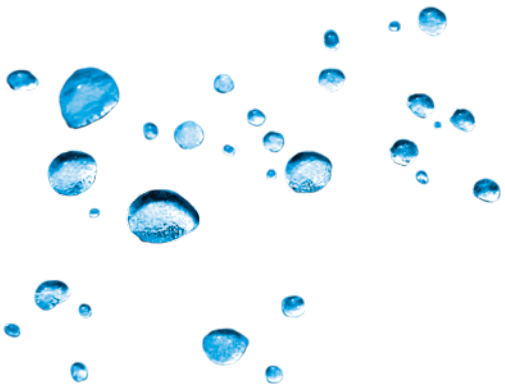
ISOLITE
High Temperature Solutions

Automotive | Aviation | Industry

ISOLITE WATERSTOP

So nothing can rain on our parade.



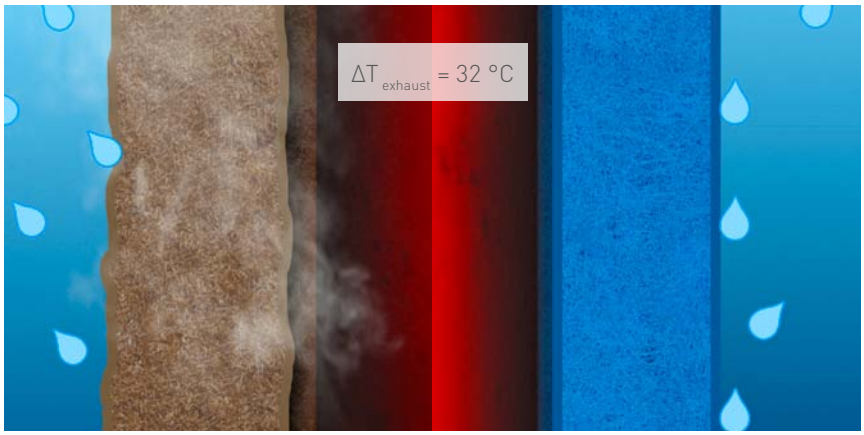
Only a dry insulating body can provide optimum insulation. Moisture is especially damaging for acoustic insulation systems with perforations, but also for closed insulation systems in vehicle underbodies, e. g. for diesel particle filters, SCR modules or all kinds of sound absorbers. There are various reasons for this, as we will show.

Maximum energy

To achieve the full thermal effect, insulation must be completely warmed through. If water then gets into the insulation, it must be evaporated. This requires energy, and therefore takes valuable heat from the exhaust system, as the following illustration shows.

$Q_{ISO} = m \cdot cp \cdot \Delta T$

Only when the amount of heat the insulation needs to absorb is minimised can the exhaust system retain the maximum amount of energy.



Conventional insulation system

ISOLITE WATERSTOP

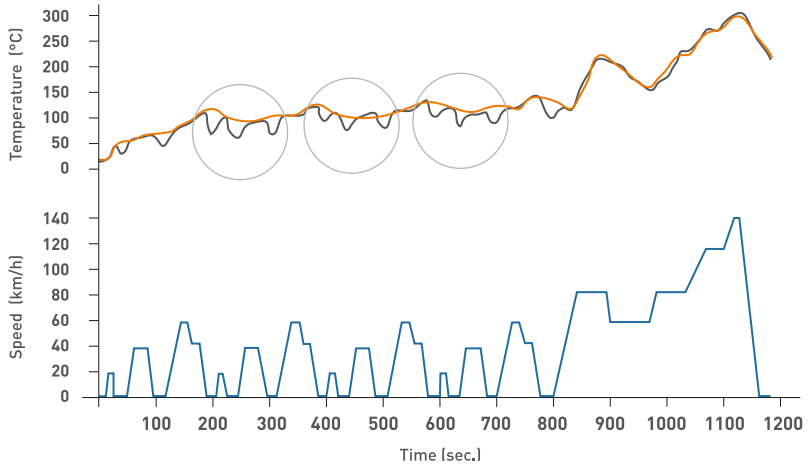
The water resistant insulating technology.

ISOLITE WATERSTOP offers effective splash and condensation protection for thermal and acoustic insulation. Our smart technology with its lotus effect (also known as hydrophobicity) ensures that insulating bodies stay dry and keeps salt, dirt and dust particles out. The benefits are improved durability, reduced fuel consumption and lower emissions, not to mention highly efficient insulation.

ISOLITE WATERSTOP can be used in conjunction with any ISOLITE product, and has applications in the automotive sector, in aviation, and in other branches of industry. ISOLITE WATERSTOP represents a particularly useful and sensible addition for thermoacoustic insulation systems and the perforation of the outer liner (AKUSTOP technology) these involve.

Lower emissions, minimum consumption

This loss of energy causes increased emissions and regeneration time, especially in the warming-up phase. This in turn necessitates a greater post-injection volume.



Perfect insulation
Damp/damaged insulation

The marked drops in temperature in the exhaust system during the new European driving cycle with start-stop (NEDC) come from damp/damaged insulation which requires more energy to be fully effective.

Improved durability

Insulation that is not hydrophobic allows dirt and dust particles to penetrate the insulating body. Salt and rust crystals and other deposits then form that chemically attack components and can cause mechanical damage to the insulating fibres due to the increased friction on the crystals. Heavy salt deposits also increase the thermal conductivity, which has a knock-on effect on the effectiveness of the insulation.

Measurements have shown:
95 % fewer salt deposits and 99.75 % less water absorption

Comparison: Thermal conductivity

Standard insulating shell	0.180 W/m · K at 800 °C
NaCl salt crystal	6.49 W/m · K at 16 °C

Should you require any further information, we'll be happy to send you the following brochures:

- ISOLITE AKUSTOP
- ISOLITE XP
- ISOLITE XP Filling

Please get in touch!

* Salt-spray test to DIN EN ISO 9227