

SOLVAY



Sustainable foaming solutions for the
FOOTWEAR INDUSTRY



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Alve-One® foaming agent solutions, bringing more value for your footwear foamed applications



Matching the technical performances of the market reference with a cost competitive solution



Enhancing sustainability performance for footwear products with a compliant and safe foaming agent



Simplifying logistics through a safe-to-use foaming agent, delivering foams containing no odor



Improving competitiveness by optimizing formulations or manufacture processes (if desired)

Alve-One® characteristics

Chemical composition

Mineral based, endothermic decomposition

Physical form

Powder, Masterbatch*

Resins

Elastomers, linear & crosslinked Polyolefins, rigid & flexible PVC, Rubber

Granulometry range

Adapted to your process:
From 5 μm to 50 μm

Processing temperature range

Adapted to your process:
From 140 to 210 °C

Packaging

Supporting your needs

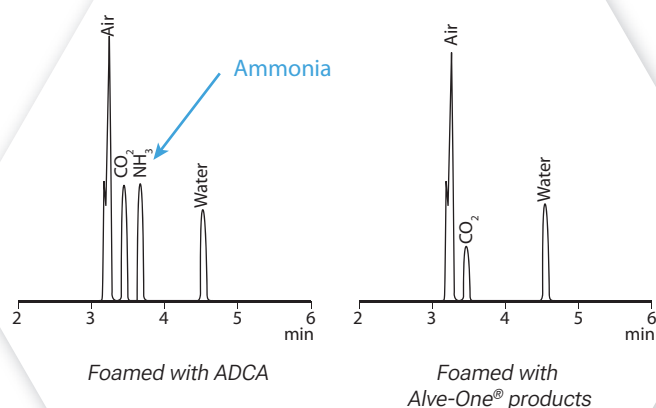
*Available on demand
depending on your region.
EU made
Made in Italy

100%
non-toxic



Foams for a sustainable future

Alve-One® foaming agents are based exclusively on safe raw materials combinations, 100% compliant with REACH regulations, and deliver efficient expansions without compromising people's safety and the environment.



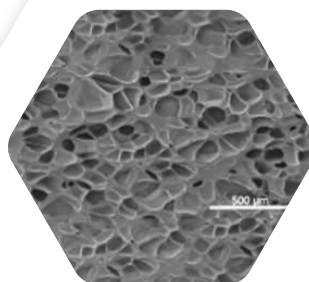
Gas emitted by crosslinked EVA foams when manufactured using Alve-One® products and ADCA

Foams manufactured with Alve-One® blowing agent solutions do not emit ammonia.

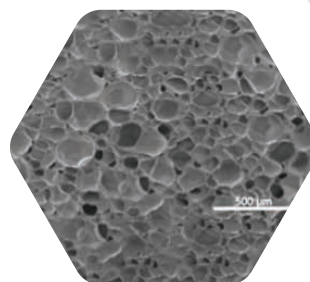
*Chromatography obtained with a GC-MS

Under the same processing conditions range, the cellular structure of both foams is comparable with similar average cell size, anisotropy and homogenous cell size distribution.

*Images obtained with SEM (Scanning electron Microscopy)



Foamed with ADCA



Foamed with Alve-One® products

Cross-linked EVA foam structures



Alve-One® answering the footwear industry needs

»» Compliant with ZDHC and other MSRL lists

»» Reduces shoes CO2 footprint

»» Eliminates ammonia smell

»» Achieves shoe soles lightweighting and other required properties

»» Shoes' formulations optimization

»» Shoes' production process optimization

»» Reliability of supply



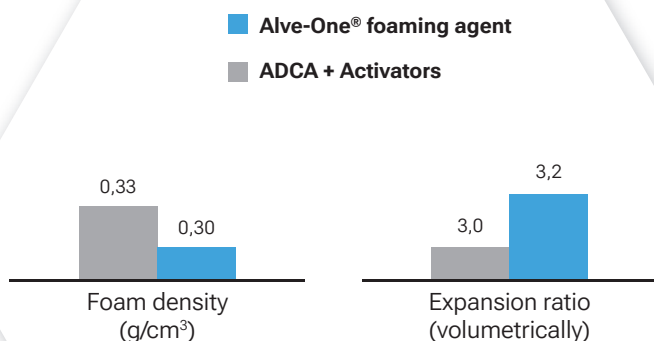
Using alve-one solutions to further optimize shoe producers' formulations and production processes

While Alve-One® solutions can replace the foaming agent used in shoe producers' formulation without adaptation, the formulation can also be optimized to achieve additional benefits.

	Temp. (°C)	Time (min)	Foam density (g/cm ³)
Not optimized formulation	180	7	0.24
Optimized formulation	175	5	0.21

*Reference process conditions for Azodicarbonamide

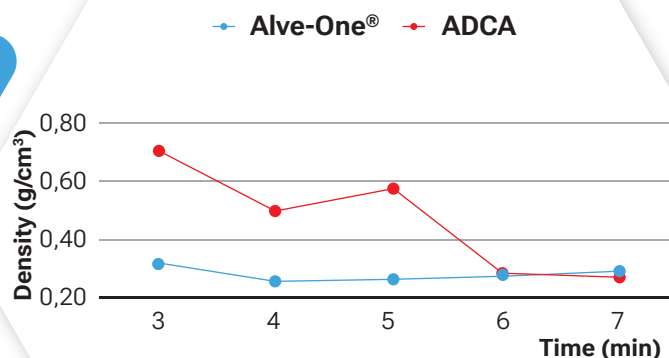
Comparison of process parameters for EVA based formulations with Alve-One® products



Crosslinked EVA formulation foamed using ADCA with Activators versus Alve-One® product without kickers.

Alve-One® products do not require activators meaning less raw materials are needed while often also achieving improved density reduction & expansion ratio.

With a more efficient kinetic process than the market reference's, Alve-One® solutions can reduce cycle times, leading to potential savings and higher outputs.



Evolution of crosslinked EVA foams' density during the manufacturing process when using ADCA and Alve-One® products.

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