

Nano® Perforation

Nano® Perforation from dy-pack: **Air permeability and paper strength.**

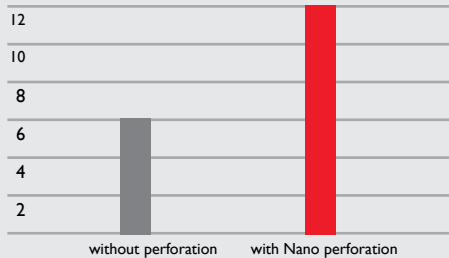
Swift release of air without downgrading the tensile strength of the paper. That was the market requirement and we have solved this challenge with an evenly distributed perforation over the outer surface; Nano® Perforation 4. The swift deaeration is achieved and reduction of paper grammage becomes possible.



The patented hole pattern is comparable to a stable molecular chain. The paper strength and tensile strength are only slightly reduced in contrast to conventional perforation.

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Comparison of air porosity



Deaeration is improved many times over:
Amount of air measured inside 1 hour drawn
from area of 0,10 m².

■ without perforation
■ with Nano perforation

The advantages of Nano® Perforation at a glance

- Rapid deaeration
- Good pack filling
- High material strength
- Cost reduction through lower grammage or fewer plies
- Greater moisture protection with nanoporated films

Moisture protection through partial strip perforation

dy-pack have developed tools which make it possible to apply Nano® Perforation to a defined area for the first time. The goal is to limit the surface area open to risk of moisture ingress by ensuring that the perforated areas are covered by other sacks when palletised. Unprotected areas of the top and bottom of the sack are not perforated. Through these variable techniques moisture absorption is considerably reduced.



 **dy-pack**
... creating added values.