

packaging_technology

InMat Technology: **Packaging** **Elastomers** **Innovation**

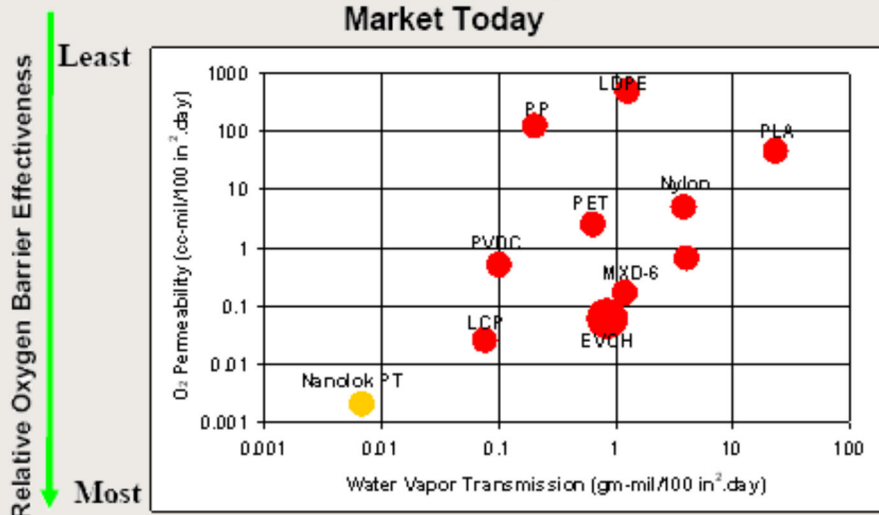
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Nanolok Technology For High Barrier Applications

What is it?

Pioneered by InMat Inc., Nanolok coatings start as aqueous suspensions of nanodispersed silicates in a polymer matrix. They are environmentally friendly, and can be applied via gravure coating processes to polyester film (or other substrates using appropriate adhesives). Nanolok technology provides the highest gas barrier of any polymeric coating available on the market today.

InMat Nanolok™ Coatings Provide the Highest Oxygen Barrier of Any Polymeric Coating Available on the Market Today



What are the benefits?

- Reduced material/structure costs
- Same level of barrier achieved with coatings on different substrates (OPP same as PET)
- Cost effective vs. EVOH, PVDC
- High transparency (see-through clarity)
- Can be gravure applied
- Thin coating maintains physical properties of the substrate
- Recyclability
- Environmentally friendly

How does it work?

The Nanolok aqueous suspension is applied via roll (or dip, or spray) coating process onto a polyester film or other substrate. Once dry, a very thin coating (0.25-2 microns or 0.01-0.08mils) of Nanolok forms on the substrate.

This coating contains hundreds of nanodispersed platelets per micron of coating thickness. These platelets form a tortuous path for molecules such as oxygen and aromatics,

what's_news

- ▲ Ultrahigh barrier coating breakthrough from InMat reduces food packaging costs and environmental impact. [read more](#)
 - ▲ InMat receives Product Award from Nanotech Briefs [read more](#)
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contact_info

InMat Inc.

P.O. Box 7
Raritan, NJ 08869

Phone: 908-874-7788

Fax:

Email: contact@inmat.com

For comments, questions or inquiries [click here](#)

dramatically increasing the barrier properties of the substrate. Nanolok[™] coatings form an extremely efficient barrier which can be 100[×]s of times less permeable than the uncoated substrate. In addition, these coatings are transparent, thus useful for see-through packaging applications. Thin coatings are applied, making these coatings highly cost-effective: approximately 1-2 microns (0.04-0.08 mil) of Nanolok[™] coating, for example can replace 12 microns (0.5 mil) of EVOH to achieve the same level of oxygen barrier.

