

Solution Case Study

Formulate green adhesives and sealants with broad adhesion performance in difficult conditions thanks to Dynasytan® 1146

Aminosilane: Dynasytan® 1146

Technologies

Adhesives and sealants based on:

- MS Polymer
- Silane modified polyurethane/polyether (SMP)
- RTV-1 / RTV-2 silicones
- Butyl rubber

Markets

Construction, parquet adhesives, transportation, do-it-yourself, industrial assembly

Key benefits

- Excellent adhesion performance to many substrates
- Reduced water uptake
- Good HSE and environmental profile

The challenge

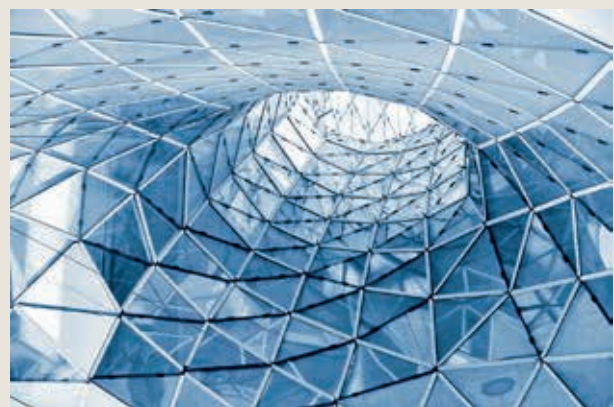
End users and the environment are key concerns for formulators when developing new adhesives and sealants. At the same time, maintaining the overall product performance level (adhesion, moisture resistance), even in harsh conditions, is a must.

The solution

With Dynasytan® 1146, formulators can develop adhesives and sealants with outstanding adhesion performance and an important water-repellent effect. It also allows formulating environmentally friendly and safe adhesives and sealants:

- Dynasytan® 1146 releases significantly reduced VOC amounts compared to traditional aminosilanes
- Dynasytan® 1146 is not skin-sensitizing

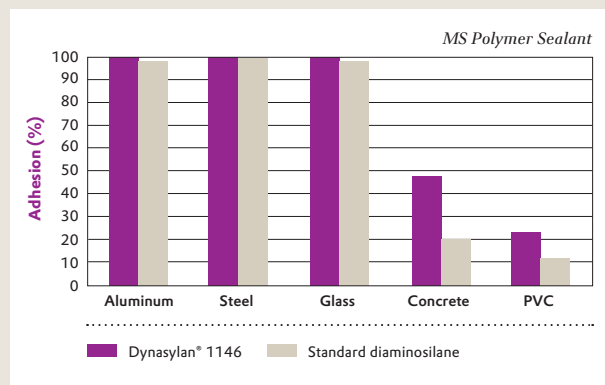
Dynasytan® 1146 is particularly suitable for construction, parquet applications and transportation.



Enhanced adhesion performance

Dynasytan® 1146 exhibits very good adhesion performance withstanding difficult conditions such as exposure to moisture. It significantly improves adhesion to substrates especially when formulating innovative SMP (hybrid) systems or RTV silicones.

With Dynasytan® 1146, you can achieve excellent adhesion performance on a wide variety of substrates such as aluminum, steel, glass and wood; but even adhesion on critical concrete and PVC can be improved.

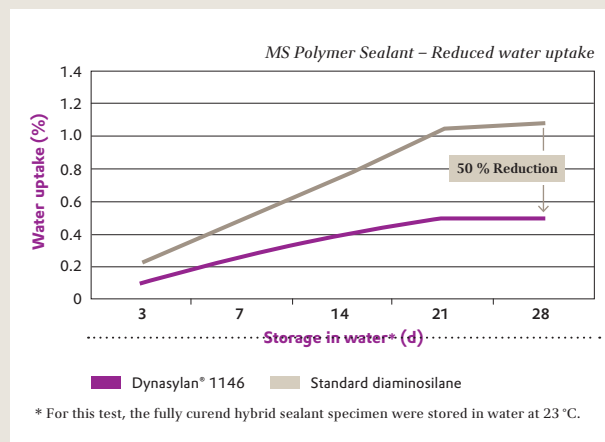


Adhesion performance of MS Polymer Sealant on various substrates

Reduced water uptake

Dynasytan® 1146 prevents adhesives and sealants from deterioration as it helps to protect against moisture penetration or water absorption.

Sealants formulated with Dynasytan® 1146 enable to reduce water absorption by 50%.



Water uptake results

Additional advantages provided by Dynasytan® 1146

- Less yellowing of white or transparent sealants compared to traditional aminosilanes
- Balance of important mechanical properties such as tensile and flexural strength to a high level

This information and any recommendations, technical or otherwise, are presented in good faith and believed to be correct as of the date prepared. Recipients of this information and recommendations must make their own determination as to its suitability for their purposes. In no event shall Evonik assume liability for damages or losses of any kind or nature that result from the use of or reliance upon this information and recommendations. EVONIK EXPRESSLY DISCLAIMS ANY REPRESENTATIONS AND WARRANTIES OF ANY KIND, WHETHER EXPRESS OR IMPLIED, AS TO THE ACCURACY, COMPLETENESS, NON-INFRINGEMENT, MERCHANTABILITY AND/OR FITNESS FOR A PARTICULAR PURPOSE (EVEN IF EVONIK IS AWARE OF SUCH PURPOSE) WITH RESPECT TO ANY INFORMATION AND RECOMMENDATIONS PROVIDED. Reference to any trade names used by other companies is neither a recommendation nor an endorsement of the corresponding product, and does not imply that similar products could not be used. Evonik reserves the right to make any changes to the information and/or recommendations at any time, without prior or subsequent notice.

Dynasytan® is a registered trademark of Evonik Industries or one of its subsidiaries.

EVONIK RESOURCE EFFICIENCY GMBH

Business Line Silanes
 Rodenbacher Chaussee 4
 63457 Hanau
 Germany
dynasytan@evonik.com
www.dynasytan.com

