

K-KAT 670 is an excellent catalyst for crosslinking of silanated polymers, end-capped with dimethoxy, trimethoxy or diethoxy silane groups.

- Highly effective to replace tin
- Excellent for diethoxysilane
- Eliminates methanol emissions

Typical Properties	
Appearance	Light, amber liquid
% Active	100
Specific Gravity, 25°C	0.94
Typical Use Levels	
0.1% to 3.0% as supplied based on TFW	

Performance

Dryness Development

K-KAT 670 demonstrates activity that is similar to tin catalysts in dimethoxysilane and trimethoxysilane polymer systems.

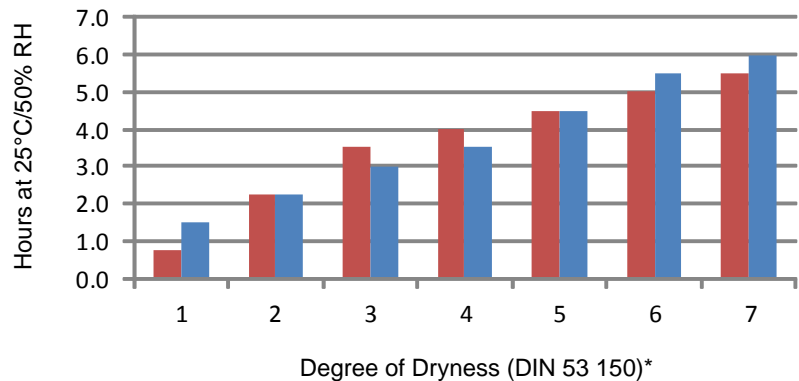
- 2.0% K-KAT 670
- 0.5% DOTDAA

K-KAT 670 catalyzed the crosslinking reaction of a non-methanol emitting moisture cure organosilane system based on diethoxysilane polymer, while tin catalysts were essentially not active at levels that doubled the maximum tin concentrations allowable in current EU regulations.

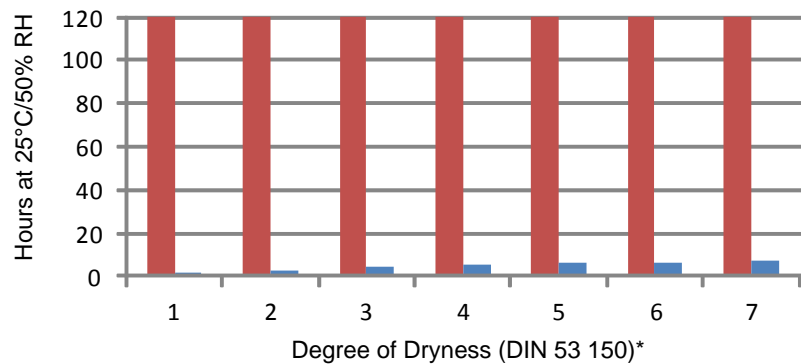
- 2.0% K-KAT 670
- 0.5% DOTDAA

* Degree of Dryness (DIN 53 150)

Dimethoxysilane Formulation



Diethoxysilane Formulation

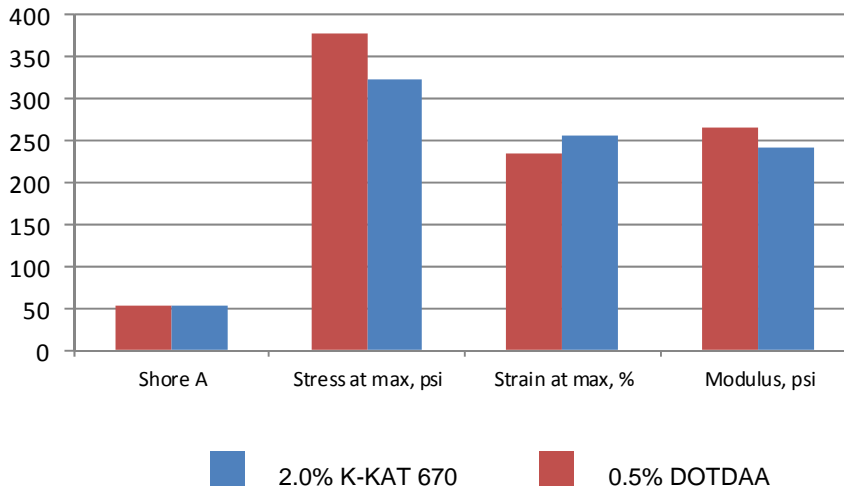


1	Touch dry, no visible residue remaining on rubber glove
2	Paper does not adhere, but visible change with 20g load
3	Paper does not adhere, but visible change with 200g load
4	Paper does not adhere, but visible change to coated surface with 2Kg load
5	Paper does not adhere, no visible change to coated surface with 2Kg load
6	Paper does not adhere, but visible change to coated surface with 20Kg load
7	Paper does not adhere, no visible change to coated surface with 20Kg load

Mechanical Properties

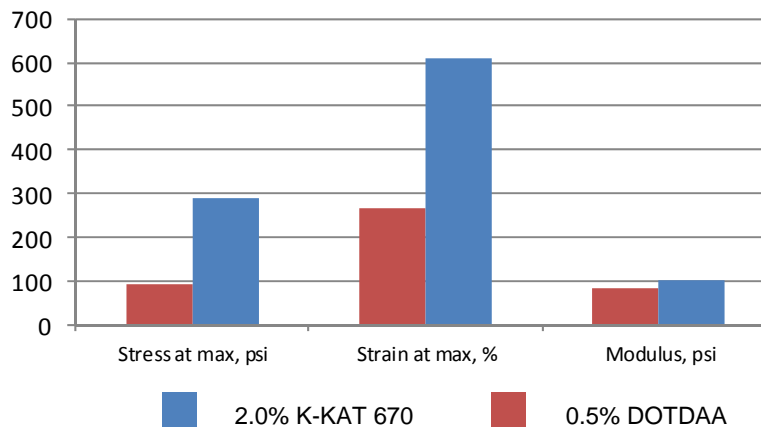
After 2 weeks ambient cure, the Dimethoxysilane (DMS) system gave a Shore A hardness of 52 for both the DOTDAA and the K-KAT 670 catalyzed systems. The 0.5% DOTDAA used represents the upper limit for tin use, without hazard labeling in Europe. After 2 weeks the mechanical properties for the cured DMS system gave very similar tensile strength, elongation and elastic modulus for both catalysts.

Dimethoxysilane Formulation
Mechanical Properties After 2 Week Cure



After 2 weeks ambient cure, the Diethoxysilane (DES) system gave a Shore A hardness of 48 for the system catalyzed with K-KAT XK-670. The DES system catalyzed with 0.5% DOTDAA only gave a Shore A hardness of 22, after a 1 month ambient cure. The mechanical properties for the DES system catalyzed with the K-KAT 670 after 2 weeks are far superior to those of the system catalyzed with DOTDAA, even after a month ambient cure, especially for tensile strength and elongation.

Diethoxysilane Formulation
Cured Mechanical Properties*



*Cure Schedule for Full Cure: K-KAT XK-670: 2 week; DOTDAA: 1 month

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