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**

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>Light, amber liquid</td>
</tr>
<tr>
<td>% Active</td>
<td>100</td>
</tr>
<tr>
<td>Specific Gravity, 25°C</td>
<td>0.94</td>
</tr>
</tbody>
</table>

**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**

![Graph showing dryness development for dimethoxysilane formulation]

**Diethoxysilane Formulation**

![Graph showing dryness development for 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

* Degree of Dryness (DIN 53 150)
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.

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.

**Contact Information**

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

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