

K-KAT[®] 670

Non-tin Catalyst for Silanes

K-KAT 670 is a non-tin catalyst designed for moisture cure coatings, adhesives, sealants and elastomers based on silane terminated polymers. It is an environmentally-friendly alternative to tin catalysts in the following silane systems:

- ✓ Methoxysilanes
- ✓ Ethoxysilanes
- ✓ Oximinosilanes
- ✓ Acetoxysilanes
- ✓ SPUR

K-KAT[®] 670 Advantages

- ✓ Effective alternative to tin catalysts
- ✓ Provides comparable through dry to tin catalysts
- ✓ Superior catalysis of ethoxysilanes
- ✓ Achieves equal or better mechanical properties to tin

K-KAT 670 is an effective catalyst option for replacing tin in commonly used methoxysilane terminated moisture cured sealants. It also has superior performance in ethoxysilane polymers in comparison to tin as shown in **Table 1**.

Table 1. Degree of Dryness, hours*

* hours to pass Erichsen Dryness Degree 7: no tack or impression after applying 20 kg load

	DMS	TMS	DES	SPUR	Acetoxy
No Catalyst	24+	24+	120+	24+	6.5+
Tin Catalyst	5.5	5.0	120+	2	2
K-KAT 670	6.0	6.0	7.0	3	3

dimethoxysilane (DMS), trimethoxysilane (TMS), diethoxysilane (DES), silyl terminated polyurethane (SPUR)

Table 2. DMS Mechanical Properties

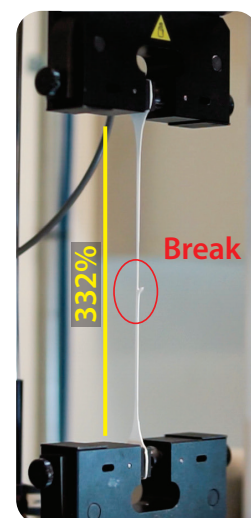
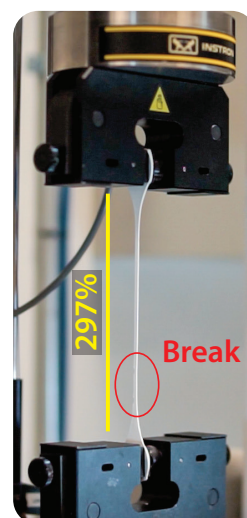
2 Week Ambient Cure

	Tin Catalyst	K-KAT 670
Shore A	52.0	52.0
Stress at max, psi	356.0	370.3
Strain at max, %	297.0	332.4
Modulus, psi	153.4	210.7

Mechanical Testing - Instron

Tin Catalyst

K-KAT 670



K-KAT 670 achieves equivalent or improved mechanical properties to tin as shown in **Table 2** of a dimethoxysilane system.

K-KAT[®] 670 Incorporation

Recommended dosage is 0.5% with a 2.0% max loading on total formula weight. Efficient cure can be achieved with low catalyst load in combination with an equal dose of 3-aminopropyl-triethoxy silane. K-KAT 670 should be added with planetary mixing to reduce exposure to moisture. Product should be stored in a cool, dry environment.

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