Product Data Sheet

Preliminary Data Sheet
K-KAT® XC-C227

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K-KAT XC-C227 is an effective catalyst for the reaction of isocyanates and blocked isocyanates with hydroxyl groups. It is a bismuth complex specially formulated to provide longer potlife and improved hydrolytic stability.

ADVANTAGES:

Does not contribute to hydrolysis of polyester resins
Excellent cure response
Excellent corrosion protection
Catalyzes aliphatic and aromatic isocyanates
Catalyzes ketoxime, pyrazole, lactam and glycol ether blocked isocyanates

TYPICAL PROPERTIES:

Appearance	Clear, amber liquid
% Active (metal carboxylate)	37
% Metal	12
Specific gravity, 25°C, g/ml	1.12

SOLUBILITY:

n-Butanol	Soluble
Ketones	Soluble
Glycol ethers	Soluble
Aromatic, aliphatic hydorcarbons	Soluble
Water	Not Soluble

APPLICATIONS:

Solvent borne 2-component (2K) isocyanate and blocked isocyanate crosslinked coatings. K-KAT XC-C227 provides improved potlife and high reactivity in force-dried applications compared to standard bismuth carboxylates.

TYPICAL USAGE LEVELS:

0.05 to 0.5 % as supplied on total resin solids.

INCORPORATION:

K-KAT XC-C227 can be added directly to the blocked isocyanate or into the polyol component of a 2K system.

SHELF LIFE:

24 months from the date of manufacture, when stored at ambient conditions in the original container.

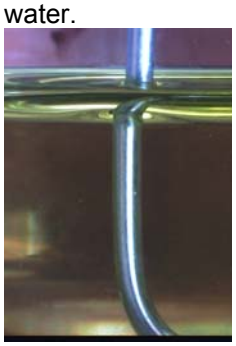
HANDLING & STORAGE:

K-KAT XC-C227 is classified as a corrosive liquid. Safe handling of this product should include the use of safety glasses and gloves. Avoid breathing vapors - use with adequate ventilation. Product should be stored in lined or glass containers away from sunlight and excessive heat. Refer to MSDS for detailed information.

REGULATORY:

Please refer to Section 15 of the Material Safety Data Sheet for information.

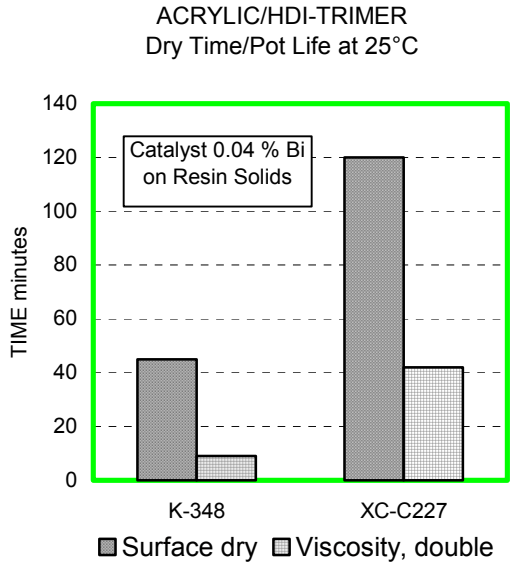
Conventional bismuth carboxylate catalysts are prone to hydrolysis on exposure to trace amounts of water.

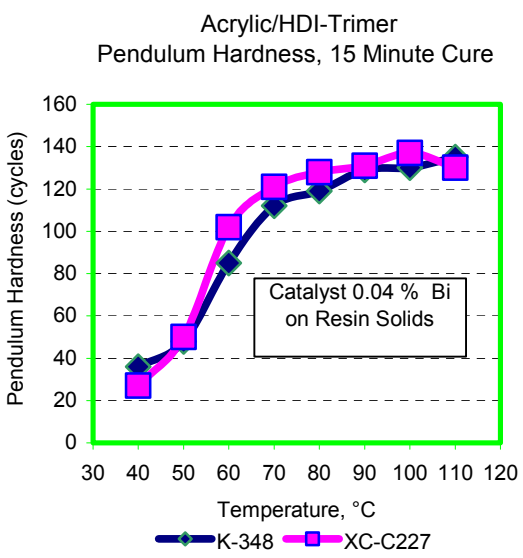


This picture shows K-KAT XC-C227 exposed to two months of humidity in an open container. The catalyst is completely clear with no indication of any precipitation. This improved hydrolysis resistance is also observed in catalyst solutions.

A non-chelated bismuth carboxylate catalyst shows precipitation of bismuth oxide on the walls of the container and a partial loss of activity. Bismuth carboxylate catalysts will also hydrolyze when diluted with solvents that contain trace amounts of water.

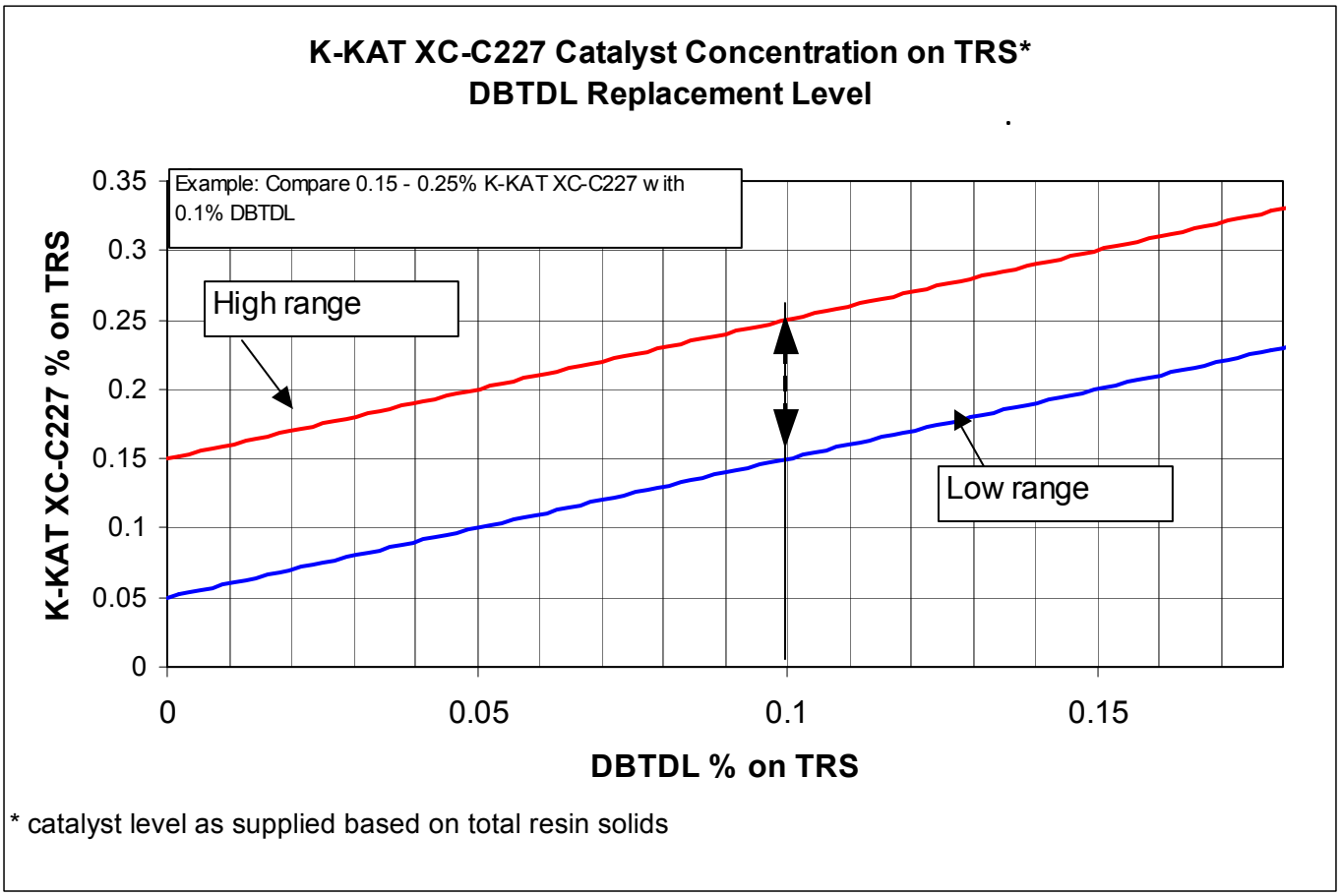
K-KAT XC-C227 catalyst improves the potlife in two component coatings and gives excellent catalysis under forced cure conditions.





Potlife of a 2K formulation crosslinked with an aliphatic isocyanate are increased with the use of K-KAT XC-C227 over a bismuth carboxylate catalyst (K-348). Cure reaction is also slower at temperatures of between room temperature and 50°C.

K-KAT XC-C227 catalyst catalyzes a 2K formulation above 50°C. These formulations are also less prone to blistering due to moisture.



* catalyst level as supplied based on total resin solids