



FOMREZ[®]

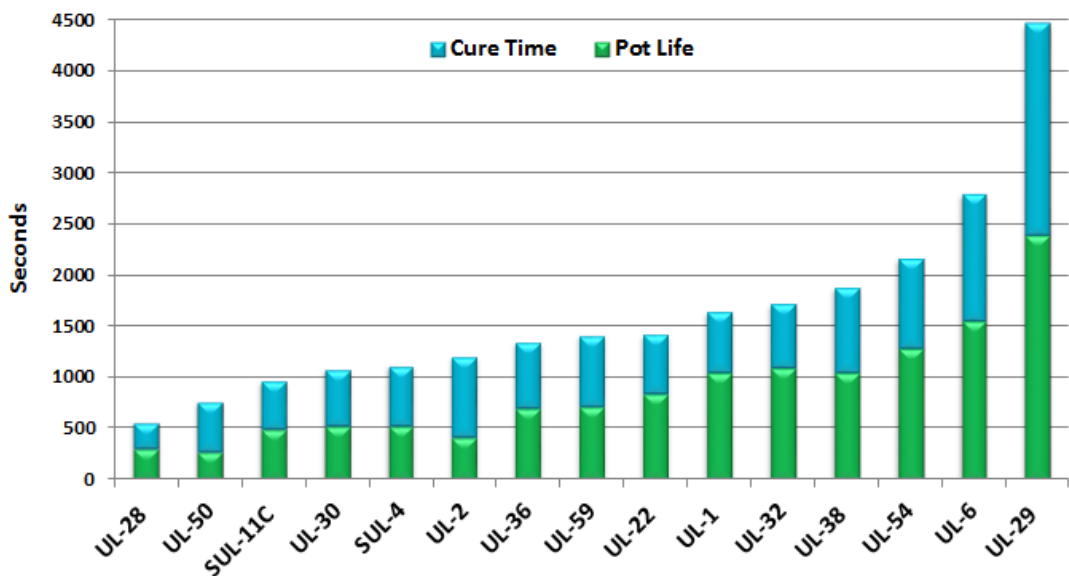
Tin Catalysts

FOMREZ® Tin Catalysts

For more than four decades, Galata Chemicals has produced FOMREZ tin catalysts at its manufacturing facilities in Germany and the USA. Commercially active in more than 60 countries, Galata Chemicals offers products and services to meet customer needs around the world. FOMREZ tin catalysts represent all classes of organotin chemistries including carboxylates, oxides, mercaptides, thioglycolates and sulfides. Each class of tin catalyst delivers different performance characteristics in terms of hydrolytic stability and rate of cure as outlined in the table below.

<div><div></div><div>better</div><div>Hydrolytic Stability</div><div>worse</div></div>	Catalyst Types	FOMREZ TIN CATALYST		
	Mercaptide	UL-32	UL-1	UL-22
	Thioglycolate	UL-29/29C	UL-6	UL-54
	Carboxylate	UL-59	UL-36 UL-2	UL-50
		UL-38	SUL-4 UL-30	UL-28
<div><div></div><div>moderate</div><div>Rate of Cure</div><div>high</div></div>				

Effect of FOMREZ Tin Catalysts on Pot Life & Cure Time



FOMREZ Methyltin Catalysts

FOMREZ UL-22

Dimethyltin mercaptide is a fast, hydrolytically stable catalyst used in foam applications. It maintains its catalytic activity in B-side parts of spray foam systems containing halogenated hydrofluoroolefin (HFO) based blowing agents.

FOMREZ UL-30

Dimethyltin carboxylate containing catalyst of low tin content which exhibits performance characteristics comparable to that of FOMREZ SUL-4 (DBTDL).

FOMREZ UL-28

Dimethyltin dineodecanotate is the fastest catalyst Galata Chemicals offers. It is used in a broad range of polyurethane applications (including reaction with aliphatic isocyanates) and room-temperature-vulcanized (RTV) silicone polymers.

FOMREZ UL-50

Dimethyltin dioleate is a very fast catalyst and more hydrolytically stable compared to FOMREZ UL-28.

FOMREZ UL-54

Dimethyltin dithioglycolate is a delayed-action catalyst with a fast cure time at elevated temperatures.

FOMREZ Butyltin Catalysts

FOMREZ SUL-3

Dibutyltin Diacetate, an industry standard for room temperature vulcanization of acetoxy cure silicones. Quick skin time and efficient through cure.

FOMREZ UL-1

Dibutyltin mercaptide has good hydrolytic stability and is used in water-blown polyurethane spray foam systems. If faster gel time is required, FOMREZ UL-22 can be used as an alternative.

FOMREZ UL-6

Dibutyltin dithioglycolate has good hydrolytic stability and is used in water-blown polyurethane spray foam systems.

FOMREZ SUL-4

Dibutyltin dilaurate (DBTDL) is the industry standard and most commonly used tin catalyst for a broad range of polyurethane applications. It is an effective catalyst of esterification and transesterification processes.

FOMREZ UL-2

Dibutyltin Dimaleate, a moderate to fast, broad spectrum catalyst useful in spray and geotechnical foams, CASE applications, and HR Flexible foams.

FOMREZ UL-60

Dibutyltin sulfide is a catalyst used in the manufacture of polyether- and polyester-based urethane polymers made by one-shot or prepolymer techniques.

FOMREZ Octyltin Catalysts

FOMREZ UL-29/29C

Diocetylthi dithioglycolate is the slowest delayed-action octyltin catalyst with excellent hydrolytic stability. FOMREZ UL-29C is a purer version of FOMREZ UL-29.

FOMREZ UL-36

Diocetylthi dioctoate is the fastest octyltin catalyst, mainly used for polyurethane adhesive applications.

FOMREZ UL-38

Diocetylthi dineodecanoate is a moderately fast octyltin catalyst with moderate hydrolytic stability.

FOMREZ UL-59

Diocetylthi dilaurate (DOTDL) is a catalyst suitable for a number of polyurethane applications including CASE. It is also an excellent choice in cross-linked polyethylene.

FOMREZ UL-32

Diocetylthi mercaptide exhibits good hydrolytic stability and maintains its catalytic activity in B-side parts of spray foam systems containing halogenated hydrofluoroolefin (HFO) based blowing agents.

FOMREZ Organotin Oxides

FOMREZ SUL-11C

Dibutyltin oxide solution, primarily used in Silyl-Terminated Polyether polymers (STPE).



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