Mold Making Technical Bulletin

Dow Corning® Q3-6559 Cure Accelerator

Dow Corning® Q3-6559 Cure Accelerator is a one part additive to be used with Dow Corning Silastic® moldmaking silicones to speed their cure. This additive is a concentrated solution of the same organo-platinum catalyst found in the base part of the Silastic® moldmaking products, and it is completely compatible with these products.

USE TO:

Reduce Cure Times

Mix 1-5% by weight of this additive into Silastic E, J, L, M or T to increase the cure rate and therefore reduce the time it takes these products to cure. It is not recommended that this be attempted with Silastic K, as this product has already been formulated to have a very fast cure. Addition of Dow Corning Q3-6559 Cure Accelerator to these two part organoplatinum catalyzed products will also reduce working times - the amount of time after mixing the base and curing agent that the material remains readily pourable (about to when viscosities reach 150,000 cp). The following table should be used as a guide in determining how much Cure Accelerator to use.

Dow Corning Silastic® ...	Weight % of Dow Corning Q3-6559 Cure Accelerator added to base + curing agent mixture							
	0		1		2		5	
	working time, minutes	cure time, hours	working time, minutes	cure time, hours	working time, minutes	cure time, hours	working time, minutes	cure time, hours
E	120	24	100	12	70	7	52	6
J	150	24	105	10	42	5	32	4
L	150	24	100	10	40	5	30	4
M	90	24	78	8	63	6	52	5
T	90	24	80	8	60	8	47	5

Overcome Surface Inhibition

Some surfaces will inhibit the cure of Silastic products by poisoning the organoplatinum catalyst (which is found in the base part of these products). This is evidenced by sticky, only partially cured silicone in the area of contact with surfaces such as sulfur containing clays, some resinous woods and some plastics (especially some epoxies). To overcome such slight inhibition, we recommend brushing/painting the inhibiting surface with Dow Corning Q3-6559 Cure Accelerator. This will tend to overwhelm the inhibition, and any excess accelerator will be totally absorbed into the silicone during its normal cure schedule. Adding the cure accelerator only to the inhibiting surface will not affect working time or normal cure time of the silicone.

Alternatively, such inhibiting surfaces can be painted/coated with a barrier coat to prevent surface inhibition. Typically used barrier coatings include clear acrylic sprays, oil or latex based paints, or thin coatings of petroleum jelly.

Overcome Gross Inhibition

Occasionally inhibitors are found to be present in the shop environment or surroundings that cannot be tracked down and eliminated but which still cause some degree of inhibition. Some machine oils or vapors can contain inhibitors which tend to get into the air and settle out onto silicone mixing equipment, parts and molds. The effects of this type of inhibition are normally observed as sticky silicone surfaces that were in contact with the air or overall slower cure times than expected. If the silicone molding operations cannot be isolated from these sources, adding a small amount of Dow Corning Q3-6559 Cure Accelerator can sometimes overcome the inhibition effects.

Dow Corning Q3-6559 Cure Accelerator is available in pint containers. As it is a rather concentrated solution of the organoplatinum catalyst (containing about 35 times the amount of catalyst typically found in Dow Corning Silastic products), avoid adding excessive amounts - the products can be made to cure up in only a few minutes if too much accelerator is added. Please read the Material Safety Data Sheet for detailed safe handling instructions.